Control Number: 51415

Item Number: 1

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PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

SOUTHWESTERN ELECTRIC POWER COMPANY

FOR AUTHORITY TO CHANGE RATES

DIRECT TESTIMONY OF

BRIAN BOND

FOR

SOUTHWESTERN ELECTRIC POWER COMPANY

OCTOBER 2020

**1001**

TESTIMONY INDEX



EXHIBITS

## I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION IN THE COMPANY, AND BUSINESS ADDRESS.

A. My name is Brian Bond and my business address is 428 Travis Street, Shreveport, Louisiana 71101. I am employed by Southwestern Electric Power Company (SWEPCO or the Company) as Vice President External Affairs.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS VICE PRESIDENT EXTERNAL AFFAIRS.

A. As Vice President External Affairs, I am responsible for the Community Affairs, Governmental Affairs, Economic Development, and Environmental Affairs activities at SWEPCO.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL QUALIFICATIONS AND BUSINESS EXPERIENCE.

A. I graduated from Louisiana State University in Shreveport with a Bachelor of General Studies in Natural and Applied Sciences in 1981, and a Master of Business Administration in 2007. I have been in the position of Vice President External Affairs since June 1, 2004. Prior to moving into this position, I served as state president-Arkansas/Louisiana for American Electric Power Company, Inc. (AEP) from August 31, 2003 until June 1, 2004. I served as environmental affairs manager-Louisiana and manager-waste management and mitigation services for American Electric Power Service Corporation (AEPSC) from 2000 until I became state president. Prior to the AEP/Central and Southwest Corporation (CSW) merger in 2000, I held various environmental management positions with CSW over an

18-year period. From 1998-2000, I served in the CSW Environmental Services group as corporate waste manager. From 1990 to 1998, I served as environmental affairs manager for SWEPCO when it was a CSW affiliate. I started my career at SWEPCO as an environmental chemist in 1981. In 1989 - 1990, I was employed by General Motors Corporation in the environmental engineering group, prior to rejoining SWEPCO as environmental affairs manager.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE A REGULATORY AGENCY?

A. Yes, I provided testimony in SWEPCO's 2012 Public Utility Commission of Texas (PUC or the Commission) rate case filing, Docket No. 40443, and SWEPCO's 2016 PUC rate case filing, Docket No. 46449.

## II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. There are several purposes of my testimony. First, I discuss the SWEPCO External Affairs organization and the services it provides in support of the provision of safe and reliable electricity to SWEPCO's customers.

Second, I discuss the AEPSC Federal Affairs organization and the services it provides to SWEPCO, and demonstrate that the affiliate charges billed to SWEPCO for its services are reasonable and necessary.

Third, I discuss the AEPSC Corporate Sustainability organization and the services it provides to SWEPCO, and demonstrate that the affiliate charges billed to SWEPCO for its services are reasonable and necessary.

Fourth, I demonstrate that the contributions and membership dues requested by SWEPCO in this case are consistent with the Commission rules regarding recovery and should be included in SWEPCO's cost of service in this case.

Fifth, I discuss SWEPCO's Corporate Communications organization and the necessary services it provides in support of SWEPCO's utility service.

Sixth, I discuss the AEPSC Corporate Communications organization and demonstrate that the affiliate charges billed to SWEPCO for its services are reasonable and necessary.

Seventh, I demonstrate that the advertising costs requested by SWEPCO in this case are consistent with the Commission rules regarding recovery and should be included in SWEPCO's cost of service in this case.

Finally, I describe the Environmental Services organization of AEPSC and the necessary services it provides to SWEPCO.

Q. WHAT SCHEDULES DO YOU SPONSOR IN THIS PROCEEDING?

A. I co-sponsor the following schedules with Michael A. Baird:

| Schedule | Description |
|---|---|
| G-4 | Summary of Advertising, Contributions & Dues |
| G-4.1 | Summary of Advertising Expense |
| G-4.1a | Summary of Informational/Instructional Advertising |
| G-4.1b | Summary of Advertising to Promote & Retain Usage |
| G-4.1c | Summary of General Advertising Expense |
| G-4.1d | Summary of Capitalized Advertising |
| G-4.2 | Summary of Contribution & Donation Expense |
| G-4.2a | Summary of Educational Contributions & Donations |
| G-4.2b | Summary of Community Services Contributions & Donations |

| | |
|---|---|
| G-4.2c | Summary of Economic Development Contributions & Donations |
| G-4.3 | Summary of Membership Dues Expense |
| G-4.3a | Summary of Industry Organization Dues |
| G-4.3b | Summary of Business/Economic Dues |
| G-4.3c | Summary of Professional Dues |
| G-4.3d | Summary of Social, Recreational, Fraternal or Religious Expenses |
| G-4.3e | Summary of Political Organizations Expense |

I also co-sponsor the following schedules detailing billings to SWEPCO from AEPSC along with Brian J. Frantz:

| Schedule | Description |
|---|---|
| G-4 | Summary of Advertising, Contributions & Dues |
| G-4.1c1 | Summary of General Advertising Expense |
| G-4.2a.1 | Summary of Educational Contributions & Donations |
| G-4.2b.1 | Summary of Community Service Contributions & Donations |
| G-4.2c.1 | Summary of Economic Development Contributions & Donations |
| G-4.3a.1 | Summary of Industry Organization Dues |
| G-4.3b.1 | Summary of Business/Economic Dues |
| G-4.3c.1 | Summary of Professional Dues |
| G-4.3d.1 | Summary of Social, Recreational, Fraternal or Religious Expenses |
| G-4.3e.1 | Summary of Political Organizations Expense |

## III. SWEPCO EXTERNAL AFFAIRS

Q. PLEASE DESCRIBE THE FUNCTIONS PERFORMED BY SWEPCO EXTERNAL AFFAIRS.

A. SWEPCO External Affairs performs the following functions:

- Liaison and communication with local governments;
- Liaison and communication with various state agencies and officials;
- Legislative analysis, monitoring and advocacy (legislative advocacy expenses are not included in SWEPCO's request);
- Participation in community and business development, and in local community organizations; and
- Management of SWEPCO's charitable contributions.

Q. DO THE COSTS OF SWEPCO EXTERNAL AFFAIRS INCLUDE ANY AFFILIATE CHARGES FROM AEPSC?

A. No. All of the eight External Affairs employees are SWEPCO employees, and all test year costs of External Affairs are SWEPCO costs.

Q. WHAT GROUPS ARE INCLUDED WITHIN SWEPCO EXTERNAL AFFAIRS?

A. External Affairs includes Community Affairs and Governmental Affairs. The SWEPCO External Affairs organization is shown in EXHIBIT BB-1.

### COMMUNITY AFFAIRS

Q. PLEASE DESCRIBE THE STAFFING AND SERVICES OF THE COMMUNITY AFFAIRS GROUP.

A. SWEPCO has four External Affairs managers who are primarily assigned to provide community affairs and economic development services. They are the primary contact point between SWEPCO and local government leaders, business leaders, and representatives of community and economic development organizations. Community

Affairs coordinates and facilitates solutions to community-related utility service issues, such as municipal franchise rights and obligations, quality of service concerns, right-of-way disputes, municipal ordinances related to utility service, local taxes, siting of facilities, customer service issues, regulatory issues, and billing concerns. Community Affairs is responsible for planning, managing and directing field efforts in local problem resolution, involvement in civic organizations, overseeing Company contributions, and maintaining a local presence in the communities that we serve. Community Affairs also works closely with the AEPSC Business and Economic Development Manager to promote economic growth by attracting new business and funding to SWEPCO's service area in order to bring new jobs and prosperity to our communities. Community Affairs provides support to state and regional economic development organizations by participating in partnerships with various state agencies and community organizations. These efforts focus on initiatives designed to educate local communities on how to better analyze and solicit new business opportunities. Effective economic development partnerships and programs with communities in the SWEPCO service territory stimulate the local economy and provide load growth to the area, which benefits all customers by spreading fixed costs among a larger end-use customer base.

Q. DOES SWEPCO PLAY AN ACTIVE ROLE IN THE COMMUNITIES IT SERVES?

A. Yes. SWEPCO Community Affairs oversees and administers Company and employee activities in support of the community and encourages participation in community projects. SWEPCO strongly supports a variety of community programs

and organizations. Through corporate giving and our emphasis on individual employee involvement, we are working to support and improve education, build strong communities, and enhance the environment. SWEPCO provides support to numerous community service organizations such as United Way, Boys and Girls Clubs, Junior Achievement, and Habitat for Humanity. SWEPCO also supports numerous K-12 and higher education programs throughout its service territory. Employee volunteerism is a significant contributor to the success of the various community programs SWEPCO supports.

## GOVERNMENTAL AFFAIRS

Q. PLEASE DESCRIBE THE SERVICES OF THE SWEPCO GOVERNMENTAL AFFAIRS GROUP.

A. The Governmental Affairs Managers serve as a Company interface with legislators and state elected and appointed officials on public policy issues. Governmental Affairs also monitors and analyzes legislative initiatives and bills of all kinds that could affect the utility business. Monitoring legislative activity is important so that SWEPCO is aware of developments that could impact the Company or its customers related to issues such as utility regulation, safety, tax policy, eminent domain, environmental regulation, and other matters impacting the provision of electric utility service. Monitoring legislation also allows SWEPCO to prepare for compliance with changes in laws applicable to the provision of electric service. The Governmental Affairs team also monitors and participates in projects and rulemakings at various state agencies other than the state utility commissions that affect utility service, such as the Texas Parks and Wildlife Commission, the Texas Commission on

Environmental Quality, the Texas Railroad Commission and the Texas Department of Transportation.

Q. DOES GOVERNMENTAL AFFAIRS ALSO ENGAGE IN LEGISLATIVE ADVOCACY?

A. Yes, SWEPCO engages in legislative advocacy, which involves actively promoting a particular outcome for a specific piece of legislation with legislators. However, as required by 16 Tex. Admin. Code (TAC) § 25.231(b)(2)(A), all legislative advocacy costs have been excluded from SWEPCO's request in this case.

Q. ARE THE LEGISLATIVE MONITORING SERVICES PROVIDED BY SWEPCO GOVERNMENTAL AFFAIRS DISTINCT FROM LEGISLATIVE ADVOCACY?

A. Yes. The legislative monitoring and analysis provided by SWEPCO Governmental Affairs for which SWEPCO seeks cost recovery involve identification, review, and analysis of proposed and enacted legislation to identify the potential impact on SWEPCO. For example, Governmental Affairs attends and monitors legislative hearings in order to stay abreast of the intent of proposed legislation and the different positions being voiced on the issue, and regularly meets as a team to review legislation filed and discuss its potential impact on the Company as well as how the proposed legislation might impact current regulation. Finally, when legislation becomes law, SWEPCO Governmental Affairs works with the affected groups and functions within the Company to ensure timely and proper compliance.

Q. ARE THERE CONTROLS IN PLACE TO DISTINGUISH BETWEEN LEGISLATIVE MONITORING AND LEGISLATIVE ADVOCACY ACTIVITIES?

A. Yes. SWEPCO uses separate accounting codes to maintain the distinction between legislative monitoring and legislative advocacy. SWEPCO employees receive training to identify and understand the significance of each code in order to appropriately charge their time and other expenses.

Q. HAS THE COMMISSION DISTINGUISHED BETWEEN NON-RECOVERABLE LEGISLATIVE ADVOCACY COSTS AND RECOVERABLE COSTS FOR MONITORING AND ANALYZING LEGISLATION?

A. Yes. In Docket No. 14965, a rate case involving SWEPCO's affiliate, Central Power and Light Company, now AEP Texas Inc., the Commission concluded that monitoring of legislation is distinct from legislative advocacy and is a recoverable expense. The Commission adopted the analysis of the proposal for decision, which distinguished the objectives of legislative advocacy from those of legislative monitoring. Specifically, the Commission's decision indicates that legislative advocacy focuses on affecting the outcome of the legislation, while legislative monitoring is the review and analysis of legislation to determine the impact on the utility and to prepare for any changes in the law and compliance with those changes.

Q. CAN YOU PLEASE SUMMARIZE THIS SECTION OF YOUR TESTIMONY?

A. Yes. SWEPCO has an obligation to our customers and the communities we serve to promote business policies that provide safe, affordable and reliable power. The External Affairs organization supports this important mission. Promotion of strong communities allows SWEPCO to fulfill its responsibilities to be a good corporate citizen. Clear and timely communications to community leaders are necessary to provide the public with information that supports the safe and efficient use of

electricity and their understanding of issues related to SWEPCO, such as the need for construction of generation, transmission and distribution facilities, explaining changes in rates, and tariffs and, providing prompt, accurate outage information. Also, the economic development support provided by SWEPCO assists our communities in their endeavors to improve the economic well-being of their citizens and promotes the spreading of fixed costs among more customers. Further, External Affairs activities involving monitoring and analyzing legislation keep SWEPCO management apprised of legislative developments and their impact on the local service territory, enabling the Company to comply with legislative directives.

## IV. AEPSC FEDERAL AFFAIRS & EXTERNAL AFFAIRS ADMINISTRATION

Q. IS AEPSC FEDERAL AFFAIRS A PART OF SWEPCO?

A. No. It is a separate service company organization that reports directly to Charles Patton, AEP Executive Vice President External Affairs.

Q. WHAT SERVICES ARE PROVIDED BY AEPSC FEDERAL AFFAIRS?

A. AEPSC Federal Affairs provides federal governmental affairs support to SWEPCO and the other AEP companies. The seven AEPSC Federal Affairs employees monitor federal legislation and issues that affect the business operations of the AEP companies, and serves as a resource for federal officials. AEPSC Federal Affairs employees also engage in legislative advocacy at the federal level. As in the case of SWEPCO External Affairs, employee time and other costs devoted to AEPSC Federal Affairs' legislative advocacy activities are segregated and excluded from the costs included in SWEPCO's rate request.

The AEPSC Federal Affairs team also monitors and participates in rulemakings and other public policy discussions at various federal agencies, such as the Federal Energy Regulatory Commission and the Department of Energy. Like the SWEPCO External Affairs team, the AEPSC Federal Affairs group utilizes the expertise of other affected AEP departments in analyzing federal legislative and regulatory proposals and their effect on the AEP operating companies.

AEPSC Federal Affairs services are necessary to ensure that SWEPCO is apprised of national legislative and regulatory developments and to assess the impact of such developments on SWEPCO and its customers, enabling SWEPCO to comply with resulting federal laws and regulations. These services are provided exclusively

by AEPSC Federal Affairs. There is no duplication of these services by any other AEP organization.

The provision of these services on a centralized basis allows AEP to achieve the value of economies of scale by spreading common costs across multiple subsidiaries. During the Test Year[1], $168,797 of affiliate charges for AEPSC Federal Affairs and administrative services were billed to SWEPCO. Approximately 73 percent of the Federal Affairs costs allocated to SWEPCO are directly related to labor and fringe benefits for the seven employees including leadership for the department. The reasonableness of the compensation and benefits paid to the Federal Affairs staff and External Affairs executive is supported by the testimony of Company witness Andrew R. Carlin. SWEPCO witness Brian J. Frantz addresses the allocation of these costs as a part of his testimony.

## V. AEPSC CORPORATE SUSTAINABILITY SERVICES

Q. IS AEPSC CORPORATE SUSTAINABILITY SERVICES A PART OF SWEPCO?

A. No. It is a separate service company organization that reports directly to Charles Patton, AEP Executive Vice President External Affairs.

Q. WHAT SERVICES ARE PROVIDED BY AEPSC CORPORATE SUSTAINABILITY SERVICES?

A. AEPSC's Corporate Sustainability group of three employees has three main areas of focus. First, the team is responsible for engaging diverse stakeholders who are material to our business, involving internal business units as appropriate, in order to manage risk and capture emerging opportunities. Stakeholders include customers,

[1] The Test Year includes the twelve-month period ending March 31, 2020.

investors, employees, policymakers, community partners, and non-government organizations. Second, the team promotes transparency by proactively sharing data and information about AEP's goals, performance, and strategy to demonstrate that we are listening and responding to stakeholder concerns and needs. They use multiple channels to reach targeted audiences. Finally, the team integrates sustainability into strategy, governance, and operations in order to drive shared value for our business and society.

The Corporate Sustainability Team is responsible for AEP's non-financial performance disclosure, which takes many forms. AEP's Corporate Accountability Report (CAR) reflects a commitment to transparency by proactively sharing data and information about our sustainability goals, business strategy, and environmental, social and governance (ESG) performance. In addition, the team creates sustainability-related information for local stakeholders that communicates AEP's clean energy vision and activities. AEP reports using the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) standards, as well as the Task Force for Climate-related Financial Disclosures (TCFD) framework to address the specific disclosure needs of multiple stakeholder groups.

Each year, dozens of commercial and industrial customers request access to AEP's supply chain performance, goals, environmental and safety performance, management, and strategy through supplier surveys as part of their contract renewal and/or new business development. AEP's Corporate Sustainability team manages the response to these surveys so customers can access current data to ensure AEP's

business practices align with their business goals. In 2020, AEP adopted a Supplier Code of Conduct to help address these needs.

In 2020, the Corporate Sustainability Team launched the Edison Electric Institute's (EEI) Electric Company Carbon Emissions and Electricity Mix Reporting Template for Customers. This report was developed in collaboration with corporate customers, EEI, the World Resources Institute (WRI) and peer utilities. The new report provides customers with consistent, timely, and relevant emissions and energy mix data that customers need to support their companies' sustainability goals related to carbon reduction and renewable energy.

The Corporate Sustainability Team also responds to dozens of sustainability surveys, ratings and rankings at the request of investors each year. The resulting scores inform or influence insurance costs, credit scores, investors, banks and more. They also produce an annual EEI ESG/Sustainability investor report.

The provision of these services on a centralized basis allows AEP to achieve the value of economies of scale by spreading common costs across multiple subsidiaries. During the Test Year, $79,214 of affiliate charges for AEPSC Corporate Sustainability services were billed to SWEPCO. Approximately 75 percent of the Corporate Sustainability costs allocated to SWEPCO are directly related to labor and fringe benefits for the three employees in the Department. The reasonableness of the compensation and benefits paid to the Corporate Sustainability staff is supported by the testimony of Company witness Carlin. SWEPCO witness Frantz addresses the allocation of these costs as a part of his testimony.

Q. DO YOU SUPPORT ANY OTHER AFFILIATE COSTS?

A. Yes, I do. I also support $503,202 of AEPSC membership and charitable contribution expenses charged to SWEPCO for which we seek recovery. Company witness Frantz calculates the pro forma adjustment associated with these costs. I discuss how these expenses meet Commission standards for recovery of contributions and memberships later in my testimony.

## VI. CHARITABLE CONTRIBUTIONS AND MEMBERSHIP EXPENSES

Q. DOES SWEPCO MAKE CHARITABLE CONTRIBUTIONS?

A. Yes, we do.

Q. WHAT TYPE OF CONTRIBUTIONS DOES SWEPCO MAKE?

A. SWEPCO makes contributions principally in the areas of education, community service and economic development. Community service contributions assist community organizations in providing human services, such as food, housing, health, energy assistance and safety. Once SWEPCO establishes a total budget for contributions, the SWEPCO Vice President External Affairs and the Director, Corporate Communications administer the budget in consultation with the External Affairs Managers and Corporate Communications Consultants. Priority is based on the anticipated overall benefit to communities in the Company's service area.

Q. WHY DOES THE COMPANY MAKE CHARITABLE CONTRIBUTIONS TO CIVIC AND CHARITABLE ENTITIES?

A. Part of AEP's mission is "to build strong communities." Providing financial support to non-profit organizations is just one way AEP works toward this goal. SWEPCO also believes it has a fundamental responsibility as a good corporate citizen to support

the communities where it does business. The Company makes contributions in helping to fulfill this role.

Moreover, as I explained earlier, SWEPCO employees also take leadership roles in their communities and are encouraged to work on volunteer projects to benefit non-profit organizations.

Q. DO THESE CONTRIBUTIONS BENEFIT SWEPCO'S SERVICE AREA?

A. Yes, they do. SWEPCO believes that donating locally is a cost-effective method of assisting our local communities and maximizes the benefits of the dollars for those in the community. SWEPCO works with the local communities in assessing their needs and then determines where to make contributions. SWEPCO customers often benefit directly from Company charitable contributions. One example is SWEPCO's Neighbor to Neighbor Program, where local non-profit organizations distribute funds to assist customers in need in paying their utility bills.

Q. WHAT ARE THE TOTAL TEST YEAR CHARITABLE CONTRIBUTIONS AND MEMBERSHIP EXPENSES FOR WHICH SWEPCO SEEKS RECOVERY?

A. A listing of the Company's charitable contributions is shown on Schedule G-4.2, which I co-sponsor with Mr. Baird. The Test Year total for contribution expenses for which SWEPCO seeks recovery (educational, community service and economic development) is $1,047,669 and is referenced in Schedule G-4.2. SWEPCO's portion of the contributions and donations made by AEPSC is $191,814 (refer to Schedules G-4.2a1, G.-4.2b1 and G-4.2c1). AEPSC charitable contribution policy and objectives, and the resulting contributions, are consistent in nature with those made by SWEPCO.

Q. WHAT IS THE LEVEL OF MEMBERSHIP EXPENSES PROPOSED FOR RECOVERY?

A. The Test Year total for membership expenses for which SWEPCO seeks recovery is $1,082,699 and is referenced in Schedule G-4.3. SWEPCO's portion of the membership expenses allocated to it by AEPSC is $311,388 (refer to Schedules G-4.3a.1, G-4.3b.1 and G-4.3c.1).

The reasonableness of AEPSC's allocation to SWEPCO for charitable contributions and membership expenses is supported by the testimony of Mr. Frantz. SWEPCO's charitable contributions for which it seeks recovery meets the level authorized in 16 TAC § 25.231(b)(1)(E). Company witness Michael A. Baird sponsors the supporting calculations for this determination, shown in Schedule G-4.

Q. DO THE CONTRIBUTIONS REQUESTED FOR RECOVERY BY SWEPCO MEET THE COMMISSION'S REQUIREMENTS FOR RECOVERABLE CONTRIBUTIONS?

A. Yes. I have reviewed all contributions included in Schedule G-4.2 for which SWEPCO is requesting recovery. None of the contributions violate the standards set out in 16 TAC § 25.231(b)(2).

Q. DO THE MEMBERSHIP EXPENSES REQUESTED FOR RECOVERY BY SWEPCO MEET THE COMMISSION'S REQUIREMENTS FOR RECOVERABLE MEMBERSHIP COST?

A. Yes. None of the membership costs contained in Schedule G-4.3 violates the Commission's standards for memberships set out in 16 TAC § 25.231(b)(2)(E), nor any other prohibition in 16 TAC § 25.231(b)(2).

## VII. SWEPCO CORPORATE COMMUNICATIONS

Q. PLEASE DESCRIBE THE FUNCTIONS PERFORMED BY SWEPCO CORPORATE COMMUNICATIONS.

A. SWEPCO Corporate Communications performs the following functions:

- State and local corporate communications and media relations;
- Company internal and external communications;
- Local advertising;
- Emergency communications planning;
- Liaison with AEPSC Corporate Communications; and
- Coordination of charitable contributions and sponsorships with SWEPCO External Affairs.

Q. PLEASE DESCRIBE THE STAFFING AND SERVICES OF SWEPCO'S CORPORATE COMMUNICATIONS GROUP.

A. There are five full-time employees in SWEPCO's Corporate Communications group. The department is staffed with three communications consultants, an administrative associate, and a director. The SWEPCO Corporate Communications organization is shown in EXHIBIT BB-2.

This group is responsible for planning, developing, and implementing internal and external communication strategies for SWEPCO, both independently and in coordination with AEPSC Corporate Communications. SWEPCO Corporate Communications is responsible for local customer communications issues, local employee communications, and local educational and community programs and events, including communications with the local media concerning safety, weather-related events, outages and business-related issues.

SWEPCO Corporate Communications responds to requests from news media regarding specific information about the Company; maintains and regularly updates content on SWEPCO.com, a publicly accessible website, with technical support from AEPSC Corporate Communications; and adds to and updates the content on the SWEPCO Now employee intranet site with Company scorecards, news and other information. In addition to working with traditional media, SWEPCO Corporate Communications monitors and posts to company social media sites such as Twitter, Facebook and YouTube. SWEPCO Corporate Communications also contributes to AEP Now, the corporate intranet site updated daily for all AEP employees, and provides information through bill messages and bill inserts sent monthly to SWEPCO customers.

SWEPCO Corporate Communications maintains a Speakers Bureau made up of Company employees who make presentations to community organizations on topics ranging from rates to electrical safety. The communications group also develops and places local newspaper and radio advertising addressing safety, energy efficiency, customer service programs and reliability issues such as tree trimming. During major outages, special advertising is developed and placed to keep customers informed about restoration times and available community services. SWEPCO Corporate Communications also provides materials for External Affairs, Customer Services and Marketing, and the Customer Operations Call Centers to assist in communicating with customers and local community leaders about utility issues affecting them.

Q. DO THE COSTS OF SWEPCO CORPORATE COMMUNICATIONS INCLUDE ANY AFFILIATE CHARGES FROM AEPSC?

A. No. All of the five SWEPCO Corporate Communications employees are SWEPCO employees and all Test Year costs are SWEPCO non-affiliate costs.

## VIII. AEPSC CORPORATE COMMUNICATIONS

### A. Description of Services

Q. DID SWEPCO RECEIVE AFFILIATE CORPORATE COMMUNICATIONS SERVICES DURING THE TEST YEAR IN ADDITION TO THOSE PROVIDED BY THE SWEPCO CORPORATE COMMUNICATIONS GROUP?

A. Yes. The AEPSC Corporate Communications department provides centralized services to SWEPCO, which supplement and complement the corporate communications activities performed by SWEPCO. AEPSC Corporate Communications is composed of four groups: Internal Communications & Communications Services, Creative Services, Community Relations & Marketing Communications, and External Communications. The AEPSC Corporate Communications organization is shown in EXHIBIT BB-3.

Q. WHAT ARE THE SERVICES PROVIDED TO SWEPCO BY AEPSC CORPORATE COMMUNICATIONS?

A. AEPSC Corporate Communications provides a variety of communications resources and services to support the communications and business activities of both the central organization and the company's utility operating subsidiaries, including SWEPCO. These resources and services support and facilitate communication between AEP and

its internal and external constituencies. These services include, but are not limited to: media relations support; employee communication support; public safety messaging; employee/contact safety messaging; advertising/sponsorship services; educational programming; customer communication support; project liaison services linking central business units with operating subsidiaries; community relations support; video production services; internal and external web design, development and maintenance; graphic design; administration of contributions and memberships; policy communication support; and social media monitoring and management

AEPSC Corporate Communications specializes in providing strategic project counseling to the AEP operating companies in media and public relations, and employee communications, including providing affiliates with common messaging and support on issues and topics that affect or impact all AEP affiliates.

Q. PLEASE DESCRIBE IN MORE DETAIL THE SERVICES PROVIDED BY AEPSC INTERNAL COMMUNICATIONS & COMMUNICATIONS SERVICES.

A. AEPSC Internal Communications & Communications Services has two major components. The Internal Communications section is responsible for using AEP's email system to disseminate corporate messages to employees, and for developing and maintaining AEP Now, the AEP corporate intranet, which provides all employees with company information, safety and technical training, senior executive communication, and other related information. This section researches, writes and disseminates information relevant to employees, contractors, and retirees and serves as the primary communications liaison with the corporate Human Resources department. Working collaboratively, Internal Communications and Human

Resources provide employees with current information on company activities, benefits and industry issues facing all AEP employees, contractors and retirees, and provides communication support for programs and initiatives developed by the Human Resources department. The staff contributes material to AEP Now, the company's primary intranet news platform, and serves as a conduit for sharing operating company information with the general employee population.

A separate group of Communications Consultants serves as the communications liaison to the individual operating companies on major projects, issues and initiatives. The group also provides communications support to those central business units that provide services to AEP's operating entities (e.g., the group supports the AEPSC Transmission, Generation and Customer Service, Marketing and Distribution Services groups) as well as general communications support for all of AEP's operating subsidiary utility companies including SWEPCO. This structure allows the AEPSC Communications Services section to serve as a liaison between operating company communications staffs and specific subject matter experts that are located within the central organizations. This section also supports communication activities concerning field operations issues that are shared in common, such as safety. This section is responsible for ensuring that communications strategies and information are consistent across all operating companies with respect to major projects, issues and initiatives. This section creates communications materials for use by the local operating company representatives such as web content, fact sheets, white papers, talking points, frequently asked questions, slide presentations, and displays. These materials enable the local

operating company representatives to communicate efficiently and consistently to local stakeholders regarding corporate and industry activities.

Q. PLEASE DESCRIBE IN MORE DETAIL THE SERVICES PROVIDED BY AEPSC CREATIVE SERVICES.

A. AEPSC Creative Services supports the operating companies by:

- Serving as an in-house production agency, creating live internal and external web casts, 2D and 3D animation, web and application development, video production, design, photography, and print production.
- Researching and developing emerging electronic communications technology, including virtual summits, mobile development, interactive magazine development, and responsive design.
- Maintaining the repository of the corporate accountability report and other important company messages for investors and other stakeholders.

Q. PLEASE DESCRIBE IN MORE DETAIL THE SERVICES PROVIDED BY THE COMMUNITY RELATIONS & MARKETING COMMUNICATIONS GROUP WITHIN AEPSC CORPORATE COMMUNICATIONS.

A. The AEPSC Community Relations & Marketing Communications group oversees corporate matching gifts to colleges and universities and philanthropic contributions, including the grants administration for the AEP Foundation. This group coordinates administration of a gifts database among headquarters, business units and the operating companies to process and track contribution and membership payments to organizations. This group is also involved in development of child and adult public safety advertising campaigns used in television and newspapers throughout AEP's 11-state service area and the creation of advertisements and public service messages aimed at educating the community about AEP's work to enhance the communities it

serves. It also handles advertising sponsorships. Finally, this group develops and coordinates pre-k through grade 12 education initiatives, including teacher workshops, school presentations, scholarship programs, school partnerships, mentoring and curriculum focused on safety, energy, environment, economics, and Science, Technology, Engineering and Math (STEM).

Q. PLEASE DESCRIBE IN MORE DETAIL THE SERVICES PROVIDED BY AEPSC EXTERNAL COMMUNICATIONS.

A. AEPSC External Communications interacts with regional, national, international, financial and trade media. The group provides support to the local operating companies in responding to media inquiries with AEP's position on national and corporate issues. For example, if a local operating company receives a local media request for comment on a financial, legal, or national public policy issue, the local operating company representative may refer the reporter to the Corporate Media Relations staff. The staff drafts news releases, conducts news conferences and briefings, creates talking points, responds to media inquiries, arranges and facilitates media interviews for AEP management, and meets frequently with media to improve reporters' understanding of AEP, its utility operations, and its positions on industry issues. The group is also responsible for the corporation's overall social media strategy and social media support for the operating companies, including SWEPCO.

The section is also responsible for developing and maintaining AEP.COM, AEP's website, and major elements of SWEPCO.COM, the website specific to SWEPCO, which provides customer service guides, company news, current issues, and information on storms and outages, safety, and energy efficiency.

Q. WHY IS IT APPROPRIATE FOR THESE SERVICES TO BE PROVIDED BY THE CENTRALIZED CORPORATE COMMUNICATIONS GROUP RATHER THAN SWEPCO?

A. These services are generally provided on a system-wide basis and are not specific to SWEPCO. By offering such services on a centralized basis, AEP achieves economies of scale and scope by sharing common costs across multiple subsidiaries, reducing overlap, and avoiding duplication in staffing.

Q. ARE THE AEPSC CORPORATE COMMUNICATIONS SERVICES REASONABLE AND NECESSARY?

A. Yes. As I have already described, the AEPSC Corporate Communications Department serves as a medium through which information flows among AEP, SWEPCO, and our various stakeholders. Customer communications are necessary to provide the public with information that supports the safe and efficient use of electricity. These communications supply important and needed information to customers, shareholders, employees, the media and other critical stakeholders

Q. IS THERE ANY DUPLICATION OF SERVICES PROVIDED TO SWEPCO BY THE AEPSC CORPORATE COMMUNICATIONS GROUPS?

A. No, there is not. As demonstrated in my description of these services, there is a clear line of demarcation between the corporate communications services provided by the AEPSC Corporate Communications group and SWEPCO Corporate Communications employees. Specifically, the services provided by SWEPCO Corporate Communications focus on local communications issues while the services provided by AEPSC are generally system-wide or supplementary to local efforts. For example,

AEPSC has historically created and developed safety advertising for the operating companies, including SWEPCO. This advertising is then customized for use on a local level in SWEPCO's service territory. No other organization within AEP provides corporate communications services to SWEPCO.

B. Reasonableness of AEPSC Corporate Communications Costs

Q. WHAT IS THE TOTAL CHARGE FOR AEPSC CORPORATE COMMUNICATIONS SERVICES PROVIDED TO SWEPCO DURING THE TEST YEAR?

A. The total Test Year charges for the AEPSC Corporate Communications affiliate class services provided to SWEPCO are $661,139. The following is a breakdown of the AEPSC Corporate Communications charges to SWEPCO:

| | |
|---|---|
| Community Relations and Marketing Communications | $19,788 |
| Creative Services | $193,365 |
| External Communications | $239,116 |
| Internal Communications and Communication Services | $144,419 |
| Corporate Communications Administration | $61,824 |
| TOTAL | $661,139 |

Q. WHAT ARE THE MAJOR COMPONENTS OF THESE COSTS?

A. The major components of the AEPSC Corporate Communications charges for the Test Year are as follows:

| | |
|---|---|
| Labor/Benefits | $514,059 |
| Outside Services | $106,034 |
| Materials & Supplies | $7,914 |
| Employee Expenses | $10,403 |
| Clearings/Billings | $ 1,160 |
| Other | $21,569 |
| TOTAL | $661,139 |

Q. WHY ARE THESE COST COMPONENT CATEGORIES SIGNIFICANT?

A. This breakdown shows that 78% of the Test Year AEPSC Corporate Communications affiliate charges to SWEPCO are composed of labor and related employee benefits. The reasonableness of AEPSC's salaries and employee benefit costs is supported by the testimony of Company witness Andrew Carlin.

1. Cost Trends

Q. PLEASE DISCUSS THE TRENDS IN AEPSC CORPORATE COMMUNICATIONS CHARGES TO SWEPCO LEADING UP TO THE TEST YEAR.

A. The following table depicts the trends in SWEPCO's actual affiliate charges for AEPSC Corporate Communications services for the calendar years 2017, 2018 and 2019 and the Test Year costs for which SWEPCO is seeking recovery.

| AEPSC Corporate Communications | 2017 | 2018 | 2019 | Test Year |
|---|---|---|---|---|
| | $619,077 | $666,720 | $680,891 | $661,139 |

AEPSC charges to SWEPCO have remained relatively stable in this period. These relatively stable costs are consistent with Corporate Communications' continuing efforts to control costs.

2. Budget Planning

Q. WHAT PROCESSES DOES THE AEPSC CORPORATE COMMUNICATIONS GROUP USE TO ENSURE COST EFFECTIVE PROVISION OF SERVICES?

A. AEPSC Corporate Communications employs standardized corporate budgeting tools to ensure that costs are controlled within the individual sections of the department. AEPSC Corporate Communications has its own budget plans to which it must adhere. Budgets are set annually and compliance is monitored by the use of monthly variance reports.

Q. HOW HAS AEPSC CORPORATE COMMUNICATIONS PERFORMED IN COMPARISON TO ITS FORECAST?

A. Table 1 below compares AEPSC Corporate Communications' total, actual expenditures to forecast for which it is accountable, for calendar years 2018 to 2019. These expenses are apportioned to AEP's operating companies, including SWEPCO, based on pre-determined allocation formulas. As noted above, affiliate costs to SWEPCO have remained relatively stable. AEPSC Corporate Communications' variances were mild for 2018 and 2019, and actual was less than forecast for the Test Year.

**Table 1**

| AEPSC Corporate Communications | 2018 (000's) | 2019 (000's) | Test Year (000's) |
|---|---|---|---|
| FORECAST | $5,522 | $5,827 | $6,283 |
| ACTUAL | 5,501 | $5,729 | $5,853 |
| VARIANCE Over/(Under) | ($21) | $98 | ($430) |

Q. HOW DOES THIS COMPARISON OF FORECAST VERSUS ACTUAL AEPSC CORPORATE COMMUNICATIONS COSTS DEMONSTRATE THAT THESE COSTS ARE REASONABLE?

A. AEPSC Corporate Communications' variances provide support for the fact that the department's managers are effectively managing expenses and making reasonable and prudent decisions regarding major spending initiatives.

3. Staffing Trends

Q. PLEASE DISCUSS STAFFING CHANGES WITHIN AEPSC CORPORATE COMMUNICATIONS.

A. As shown in Table 2 below, staffing levels have remained relatively consistent over the past two years.

**Table 2**

| AEPSC Corporate Communications FTEs | 2017 | 2018 | 2019 | Test Year |
|---|---|---|---|---|
| | 37 | 42 | 40 | 41 |

4. Outsourcing

Q. DOES AEPSC CORPORATE COMMUNICATIONS USE OUTSOURCING AND/OR CONTRACT SERVICES AS A WAY TO CONTROL ITS COSTS?

A. Yes. Outsourcing and contract services are used as necessary to provide specialized services that AEPSC Corporate Communications is not staffed to provide and to supplement services they provide. Outside services and contractors are used in lieu of hiring additional permanent staff. Specifically, outside service providers are used to perform "overflow" work activities when demands for communications support exceeds the department's ability to satisfy those needs with existing in-house resources. Outside services can include: project writing assignments, specialized publication and graphics design and production services, project research services, specialized video/web production needs and certain safety advertising campaigns.

This approach allows AEPSC Corporate Communications to avoid the cost of providing additional full-time staff to perform these occasional, specialized services.

## IX. ADVERTISING EXPENSES

Q. DOES THE AMOUNT OF ADVERTISING EXPENSE REQUESTED FOR RECOVERY BY SWEPCO MEET THE COMMISSION'S REQUIREMENTS FOR RECOVERABLE ADVERTISING COST?

A. Yes. As also discussed by SWEPCO witness Baird, the advertising costs contained in Schedule G-4.1, along with SWEPCO's contributions and donations, meet the Commission's standards set out in 16 TAC § 25.231(b)(1)(E) and not include any expense for the promotion of increased consumption of electricity.

## X. ENVIRONMENTAL SERVICES AFFILIATE CHARGES

### A. Organization of Environmental Services

Q. THE TEST YEAR IN SWEPCO'S LAST BASE RATE CASE IN PUC DOCKET NO. 46449 WAS JULY 1, 2015 THROUGH JUNE 30, 2016. HAVE THERE BEEN ANY CHANGES IN THE ENVIRONMENTAL, SAFETY, AND HEALTH ORGANIZATION SINCE THAT PRIOR TEST YEAR?

A. Yes. In 2015, the Environmental, Safety, and Health department was reorganized, and the Environmental Services department now stands alone as part of the Generation organization. In 2019, the Environmental Services department underwent a thorough review to ensure the services provided and staffing were in line with the

changing needs of the corporation. This action was taken as a result of numerous AEP fossil fuel plants that have either been sold or retired over the past few years.

Q. WHAT CHANGES WERE MADE TO THE DEPARTMENT AS A RESULT OF THE 2019 REVIEW?

A. All of the changes made within Environmental Services were done for the purpose of reducing operating costs, improving efficiency, eliminating waste, and minimizing risks of noncompliance. Services deemed to be core and high value in nature were retained and optimized, while some low volume or commodity functions were eliminated in favor of lower cost outsourced options. All changes were fully vetted with SWEPCO leadership prior to implementation. The most visible change to Environmental Services was the consolidation of three laboratories into a single location. The labs were located in Groveport, OH, Athens, OH, and Shreveport, LA. Since inception of the three sites decades ago, the types of samples analyzed, analytical processes used, and volumes of samples processed have changed dramatically. An in-depth evaluation of the three sites revealed that substantial efficiencies would be created by combining the three sites into a single operating location, producing annual labor and non-labor savings of more than one million dollars. Due to its size and capabilities, the Dolan Chemical Laboratory was most suited to house all functions. The other two sites were closed. A total of 10 job positions were eliminated with this consolidation, which included the transfer to Dolan Lab of two employees formerly at the Shreveport location. Beyond the laboratory changes, numerous other changes were made across the department, resulting in an additional 14 position reductions. A new Environmental Risk

Management position was added to facilitate processes and analyses to optimize compliance planning and reduce risks of noncompliance. Environmental services continues to support the environmental needs of AEP Generation, Transmission, Distribution, Workplace Services, Telecommunications, and AEP Energy Partners.

Q. PLEASE DESCRIBE HOW ENVIRONMENTAL SERVICES IS STRUCTURED.

A. Environmental Services includes the following sections:

- Air Quality Services (AQS);
- Water & Ecological Resource Services (WERS);
- Land Environment and Remediation Services (LERS);
- Dolan Chemical Laboratory (DCL);
- Environmental Risk Management (ERM); and
- Environmental Management System (EMS).

B. Function and Services of Environmental Services

Q. WHAT ARE THE MAJOR FUNCTIONS OF EACH OF THESE SECTIONS?

A. The primary role of Environmental Services is to provide permitting and compliance support, guidance, procedures, recommendations and training for AEP's operating companies in order to maintain and improve their environmental programs and enhance compliance with environmental laws, regulations, and policies. Environmental Services is also involved in the development process for environmental regulations, coordinating with other groups within AEP as well as with SWEPCO and other operating companies, as applicable. Environmental Services supports AEP's corporate strategies and values concerning the environment.

Air Quality Services, Water & Ecological Resource Services, and Land Environment and Remediation Services are responsible for preparing and submitting

applications to obtain environmental permits for AEP operations, providing guidance and training for operations staff regarding compliance with permits and overall regulations, submittal of compliance reports to state and federal agencies, reporting and cleanup of spills, conducting site inspections, and arranging for disposal of solid wastes. This effort includes direct support for SWEPCO's generation plants, distribution operations, and transmission operations, as well as general support on broader environmental issues and regulatory programs that have impacts on SWEPCO operations. These sections, in conjunction with Environmental Risk Management, provide timely, accurate, and proactive analysis for corporate decision-making on environmental investments in AEP's system-wide least-cost environmental compliance plan.

The Dolan Chemical Laboratory section provides low cost analytical services for compliance sample analysis and also customized analytical services to help resolve problems of a chemical or physical nature that occur at operations facilities. This support covers generating plants and distribution and transmission operations. Environmental Risk Management is responsible to evaluate, develop, and direct programs for environmental risk identification and mitigation.

Environmental Management Systems develops standardized processes and applications to support environmental compliance activities. At the core of their purpose is essential compliance document control and management. They also lead continuous improvement initiatives and provide environmental training development.

Environmental Services staff are located primarily in Columbus, OH, Shreveport, LA, and Dallas, TX. In addition, Environmental Services staff with

primary responsibility for compliance support for distribution and transmission are located throughout the AEP service territory, including employees in Shreveport, LA and Longview, TX.

Q. WHAT SERVICES WERE PROVIDED TO SWEPCO BY ENVIRONMENTAL SERVICES DURING THE TEST YEAR?

A. Environmental Services provided support for permitting and associated compliance activities associated with SWEPCO's generation, transmission and distribution operations necessary to comply with federal and state regulatory programs protecting air, water, and land resources. Specifically, AQS supported SWEPCO's generating facilities by reviewing annual emissions inventories, preparing the annual Title V compliance certification as well as semiannual and quarterly deviation reports, providing corrective action responses to notice of violations, completing required Energy Information Agency reporting, and preparing Title V permit renewal applications as needed.

Similarly, the WERS section provided support for National Pollutant Discharge Elimination System (NPDES) permits for wastewater and storm water discharges by scheduling biomonitoring testing, including preparing and submitting required reports; facilitating NPDES permit renewals by performing discharge sampling, preparing the application, and meeting with agency officials to negotiate final terms and conditions; preparing stormwater construction permit documents such as notices of intent and termination and stormwater pollution prevention plans; and providing ongoing assistance to plants through evaluations and inspections of wastewater treatment facilities.

Land Environment and Remediation Services coordinated sampling of groundwater monitoring wells, including preparation of sampling and analysis plans and submission of reports to the appropriate agency; and provided training for Plant Environmental Coordinators on waste-related recordkeeping, reporting, and preparing shipments of waste for disposal, as well as the standards of the Emergency Planning and Community Right-to-Know and Toxic Substances Control Act requirements, such as assisting with collecting samples for PCB analysis.

Regional Environmental Coordinators are responsible for providing waste-related compliance services to SWEPCO's Transmission and Distribution (T&D) groups through conducting site visits to T&D facilities and coordinating clean-up and reporting of oil and chemical spills.

The Dolan Chemical Laboratory, formerly the Analytical Chemistry Services section, supported SWEPCO by performing analysis of samples collected at its facilities as required for permitting and compliance activities.

Q. ARE THE SERVICES PROVIDED TO SWEPCO BY THE ENVIRONMENTAL SERVICES ORGANIZATION NECESSARY TO SWEPCO'S UTILITY OPERATIONS?

A. Yes. The services provided by Environmental Services are essential to ensure that SWEPCO's utility operations and services are performed in a manner consistent with employee and public safety, and in compliance with applicable state and federal environmental laws and regulations. Environmental Services also plays an important role in helping SWEPCO interpret and plan for new rules.

C. Reasonableness of SWEPCO Affiliate Charges

Q. WHAT TYPES OF EVIDENCE DO YOU PRESENT TO SUPPORT RECOVERY OF THE SWEPCO ENVIRONMENTAL SERVICES CHARGES FROM AEPSC?

A. I present evidence detailing historical cost and budget trends; process improvements aimed at achieving efficiency; staffing trends; outsourcing activities; proof of benefits to SWEPCO; and non-duplication of services between SWEPCO and the AEPSC Environmental Services organization.

Q. WHAT IS THE SWEPCO ADJUSTED TEST YEAR COST FOR SERVICES PROVIDED BY AEPSC ENVIRONMENTAL SERVICES?

A. During the Test Year, SWEPCO was charged $4,003,363 for services performed by AEPSC's Environmental Services organization.

Q. HOW ARE THESE CHARGES DISTRIBUTED WITHIN ENVIRONMENTAL SERVICES?

A. Approximately 28% of the charges were for lab services rendered by Dolan Chemical Laboratory. The next largest amount was provided by Air Quality services with approximately 23%. The other Environmental Services sections combined account for the remaining 49% of billings. A complete breakdown of this distribution is provided in Table 1.

Table 1 – Test Year Charges to SWEPCO by Cost Category ($)

| Department | Labor and Related Overheads | Outside Services | Materials and Supplies | Travel & Entertainment | Other | Total SWEPCO Test Year | Total % of SWEPCO Test Year |
|---|---|---|---|---|---|---|---|
| Air Quality Services | 876,713 | 968 | 1,066 | 18,151 | 6,361 | 903,259 | 22.6 |
| WERS | 180,014 | 668 | 537 | 9,524 | 694 | 191,437 | 4.8 |
| Land Env & Remediation | 583,377 | 11,367 | 2,269 | 15,005 | 5,604 | 617,623 | 15.4 |
| Dolan Chemical Lab | 743,183 | 57,595 | 209,620 | 11,848 | 116,122 | 1,138,368 | 28.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Env. Management Systems | 144,159 | 131,179 | 474 | 2,187 | 5,217 | 283,217 | 7 1 |
| Environmental Services | 751,087 | 50,410 | 961 | 16,872 | 5,787 | 825,117 | 20.6 |
| Environmental Risk Mgt. | 10,170 | 34,172 | - | - | - | 44,342 | 1.1 |
| Total SWEPCO Test Year | 3,288,703 | 286,359 | 214,927 | 73,587 | 139,785 | 4,003,363 | ------ |
| Total % of SWEPCO Test Year | 82.1% | 7.2% | 5.4% | 1 8% | 3.5% | ------ | 100% |

Q. HOW ARE THESE CHARGES DISTRIBUTED BY COST CATEGORY?

A. As displayed in Table 1, nearly 82% of Environmental Service's charges to SWEPCO are for labor and labor-related overheads. The category "Outside Services" is the second most-charged cost category with approximately 7% of the billings. The remaining cost categories – which include Materials and Supplies, Travel, and Other – combined account for approximately 11% of charges to SWEPCO. As primarily a service organization, the majority of the costs billed by Environmental Services relate to employee time. The testimony of SWEPCO witness Carlin discusses employee salaries and benefits in support of the reasonableness of labor-related charges.

*Historical Cost Trends*

Q. WHAT IS THE COST TREND FOR THE SERVICES PROVIDED BY ENVIRONMENTAL SERVICES TO SWEPCO?

A. The Environmental Services costs charged to SWEPCO by section and by cost category are shown in Tables 2 and 3, respectively. The charges are shown for the prior historical years 2017 through 2019 and the current Test Year.

Table 2 – Historical Costs by Section ($)

| Department | 2017 | 2018 | 2019 | Current Test Year |
|---|---|---|---|---|
| Air Quality Services | 961,225 | 920,293 | 928,581 | 903,259 |
| WERS | 167,135 | 189,780 | 183,218 | 191,437 |

| | | | | |
|---|---|---|---|---|
| Land Env & Remediation Svcs | 570,554 | 525,464 | 593,755 | 617,623 |
| Dolan Chemical Laboratory | 1,197,742 | 1,178,448 | 1,206,633 | 1,138,368 |
| Env. Management Systems | 244,833 | 179,581 | 295,288 | 283,217 |
| Environmental Services | 319,829 | 350,479 | 864,548 | 825,118 |
| Environmental Risk Mgt. | - | - | 31,921 | 44,342 |
| Total Environmental Services | 3,461,318 | 3,344,046 | 4,103,944 | 4,003,363 |

Table 3 – Historical Costs by Cost Category ($)

| Cost Category | 2017 | 2018 | 2019 | Current Test Year |
|---|---|---|---|---|
| Labor & Benefits | 2,704,405 | 2,683,919 | 3,386,462 | 3,322,876 |
| Outside Services | 306,754 | 260,713 | 310,009 | 252,187 |
| Materials and Supplies | 215,556 | 218,211 | 197,495 | 214,928 |
| Employee Expenses | 90,242 | 72,222 | 78,041 | 73,588 |
| Other | 144,362 | 108,981 | 131,936 | 139,783 |
| Grand Total | 3,461,319 | 3,344,046 | 4,103,943 | 4,003,362 |

The category Labor & Benefits includes labor, fringes, incentives, and severance costs. Costs for Outside Services, Materials & Supplies, Employee Expenses and Other Cost Categories all decreased when comparing the Test Year expenses to 2017.

The reasonableness of labor costs is further supported by the testimony of SWEPCO witness Carlin, who discusses incentive compensation and long-term incentives and employee benefits.

Q. HOW DOES AEPSC MONITOR AND CONTROL ITS BUDGET WITH REGARD TO CHARGES TO SWEPCO?

A. AEPSC has a similar process for budgeting that SWEPCO follows where projects are assessed and prioritized, then budgets are created based on available funds and projected needs of the operating company. Those budgets are reviewed at multiple

levels of the organization to ensure that money is being spent where it needs to be, and to ensure that the budgets are reasonable.

D. Process Improvements Aimed at Achieving Efficiency

Q. DOES THE ENVIRONMENTAL SERVICES ORGANIZATION UTILIZE ANY PROCESSES AIMED AT IMPROVING THE EFFICIENCY OF ITS SERVICES?

A. Yes. Environmental Services utilizes the Managing Environment, Safety, & Health (MESH) system to assure compliance with environmental regulations at generating facilities. The MESH management system is a flexible, web-based application designed to track routine tasks, manage ongoing data collection, and generate necessary reports in a secure platform. It incorporates processes that take a systematic approach to improving performance through:

- Improved management of SWEPCO's significant environmental impacts;
- Written operational controls to protect the environment as well as the safety and health of our work force; and
- Preservation of accumulated knowledge and commitments independent of personnel changes.

The MESH system, managed by the Environmental Management Systems (EMS) group, helps AEPSC and SWEPCO proactively minimize costs in the long term associated with environmental penalties for non-compliance.

Environmental Services has also employed a department-wide continuous improvement program, rooted in learning from past behaviors and sharing of best practices. All reportable environmental events are now reviewed by the leadership team, identifying root causes and lessons learned, and these learnings are applied more broadly to eliminate vulnerabilities and improve other processes. An

Environmental Good Catch (EGC) program has also been developed to encourage all employees to identify situations that, if not corrected, might lead to noncompliance conditions. EGCs are shared through a tool developed by EMS and used department-wide for learning and improving. Department leadership briefly reviews an EGC at every staff meeting as a practice to always be looking for ways to improve.

E. Staffing Trends

Q. WHAT ARE THE STAFFING TRENDS BY YEAR FOR ENVIRONMENTAL SERVICES?

A. The end-of-year staffing counts represent the total number of employees reporting to the Environmental Services organization, and are provided in Table 4 below:

Table 4 – ES Staffing Levels

| Department | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| Air Quality | 22 | 21 | 21 | 14 |
| WERS | 25 | 26 | 25 | 31 |
| Land Environment & Remediation | 18 | 19 | 17 | 15 |
| Analytical Chemistry Services | 40 | 40 | 31 | 26 |
| Environmental Services | 4 | 4 | 3 | 3 |
| Env Management Systems | 5 | 5 | 6 | 7 |
| Environmental Risk Mgt. | - | - | 1 | 1 |
| Total Environmental Services | 114 | 115 | 104 | 97 |

The number of employees in the Environmental Services organization was reduced in 2019 and early 2020 in an effort to optimize department efficiencies and reduce costs.

*Benefits to SWEPCO*

Q. IS THERE AN ADVANTAGE TO SWEPCO BY ENVIRONMENTAL SERVICES STAFF PROVIDING THESE SERVICES RATHER THAN SWEPCO PROVIDING THESE SERVICES INTERNALLY?

A. Yes. Environmental issues require specialized knowledge and affect all of AEP's operating companies, including SWEPCO. A central service organization such as AEPSC serves as a common knowledge base with highly specialized expertise and provides consistency of support to AEP's operating companies in a more cost-effective manner than if the utilities had to staff and provide these services in-house. The organizational framework in place allows Environmental Services to leverage relationships we have nationally or within one jurisdiction to benefit all AEP utilities. This approach helps the AEP operating companies meet the expectations of its federal and state regulators.

Q. ARE THERE OTHER EXAMPLES OF THE ADVANTAGE TO SWEPCO OF PROVIDING ENVIRONMENTAL SERVICES ON A CENTRALIZED BASIS?

A. Yes. One such example relates to risk management. Non-compliance with environmental regulations can result in significant fines and restrictions on operations and damage to the public reputation of AEP and its affiliated companies. It is critical that the various business operations of AEP understand their compliance obligations and operate on a daily basis to meet those obligations. Consistency across AEP is an important aspect of demonstrating an effective compliance program. Having a centralized environmental program helps ensure consistency across the 11 states in which AEP and its affiliates operate.

As for permitting activities, using a centralized organization such as Environmental Services is beneficial as most permit renewal cycles are typically five years, and support staff can be more fully utilized with responsibilities for multiple operating companies versus responsibility for only one. Use of a centralized

permitting group also allows for sharing of knowledge related to permitting conditions so that a facility does not receive more stringent terms than needed based on its true environmental impact.

By creating a consistent set of processes and standards that are shared by all of the AEP operating companies, the rigor and justification for self-implemented policies and practices is reinforced and supported much more broadly.

F. No Duplication of Services

Q. ARE ANY OF THE SERVICES PROVIDED BY ENVIRONMENTAL SERVICES DUPLICATED BY SWEPCO?

A. No. While Environmental Services personnel may collaborate with SWEPCO employees to jointly accomplish environmental permitting-related and compliance-related activities, the activities of SWEPCO personnel do not overlap. The division of responsibilities allows SWEPCO personnel to remain focused on day-to-day operational concerns that best serve SWEPCO customers.

G. Outsourcing

Q. DOES ENVIRONMENTAL SERVICES OUTSOURCE ANY OF ITS ACTIVITIES?

A. Environmental Services utilizes third-party consultants for work for which it does not have expertise on-staff or where a state or federal agency requires an independent entity to perform the activity. One example is the use of third-party consultants to conduct environmental site assessments for acquisition and sale of property.

Q. DO YOU HAVE ANY FINAL COMMENTS ON ENVIRONMENTAL REGULATIONS AND THE LEVEL OF ENVIRONMENTAL SERVICES ACTIVITY ON BEHALF OF SWEPCO?

A. Yes, I do. Final and proposed EPA regulations will increasingly affect fossil-fueled power plants, and it will be incumbent on SWEPCO to comply with these regulations.

## XI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The services provided by SWEPCO External Affairs, AEPSC Federal Affairs and AEPSC Corporate Sustainability Services support SWEPCO's mission to provide safe, reliable and affordable electricity, and provide significant benefits to our customers. Many charitable organizations and educational institutions within SWEPCO's service territory are able to fulfill their respective missions, in part because of the contributions made by SWEPCO and its employee volunteers. Recovery of the costs associated with providing these services is necessary for our company to meet the ongoing obligation to our customers and communities.

The services provided by SWEPCO Corporate Communications and AEPSC Corporate Communications are also essential to SWEPCO's mission to provide safe, reliable and affordable electricity, and provide significant benefits to our customers. Recovery of the costs associated with providing these services is necessary for our company to meet the ongoing obligation to our customers and communities. Additionally, the advertising expense requested by SWEPCO meets Commission standards for recovery in rates.

Finally, AEPSC Environmental Services provides critical, cost effective support to ensure SWEPCO's generation, distribution, transmission and other facilities are operated in compliance with federal and state environmental regulations.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

SOUTHWESTERN ELECTRIC POWER COMPANY
An AEP Company

# External Affairs Organization Chart

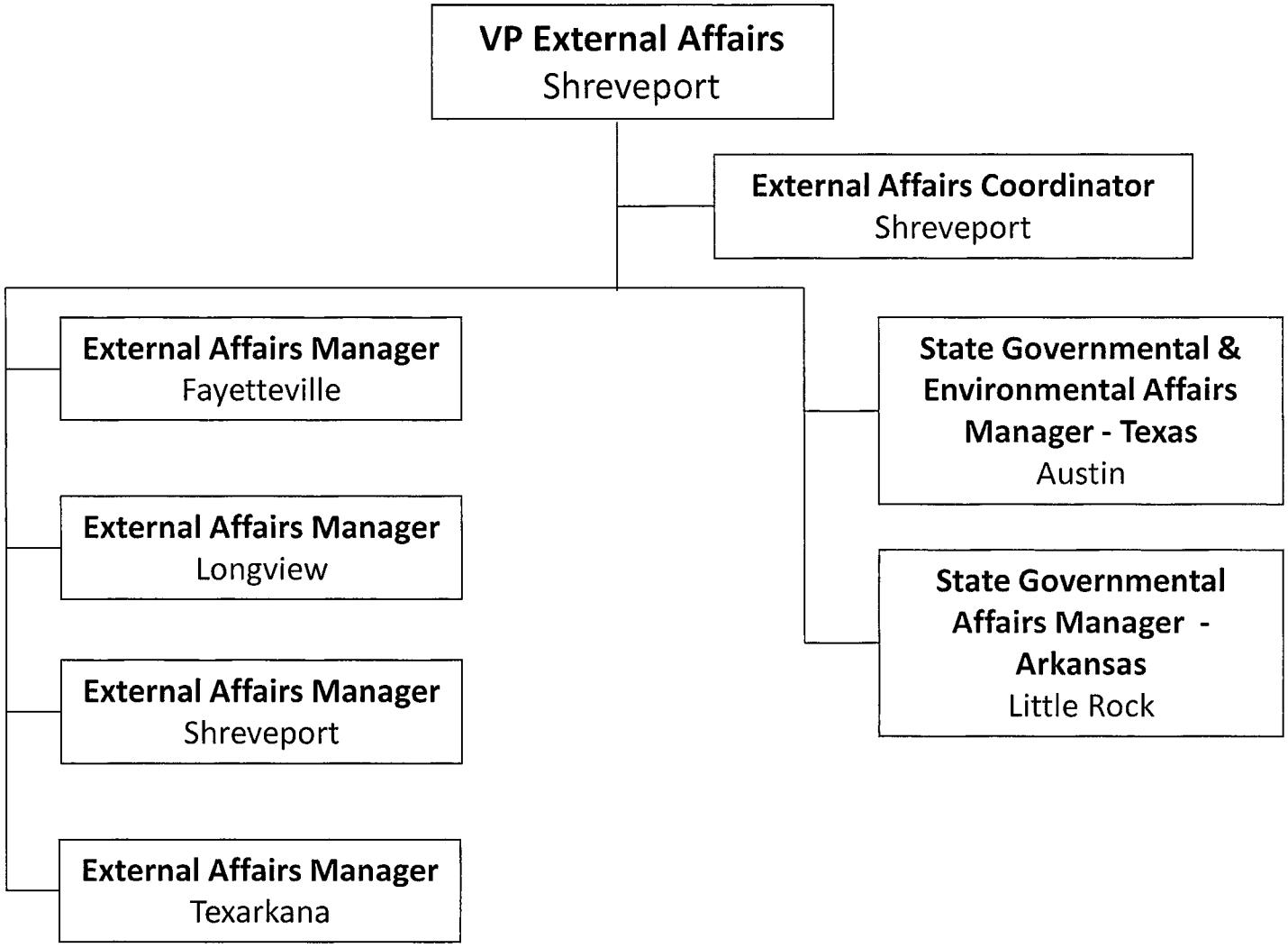


EXHIBIT BB-1

SOUTHWESTERN ELECTRIC POWER COMPANY
A unit of American Electric Power

# SWEPCO Corporate Communications Organization Chart

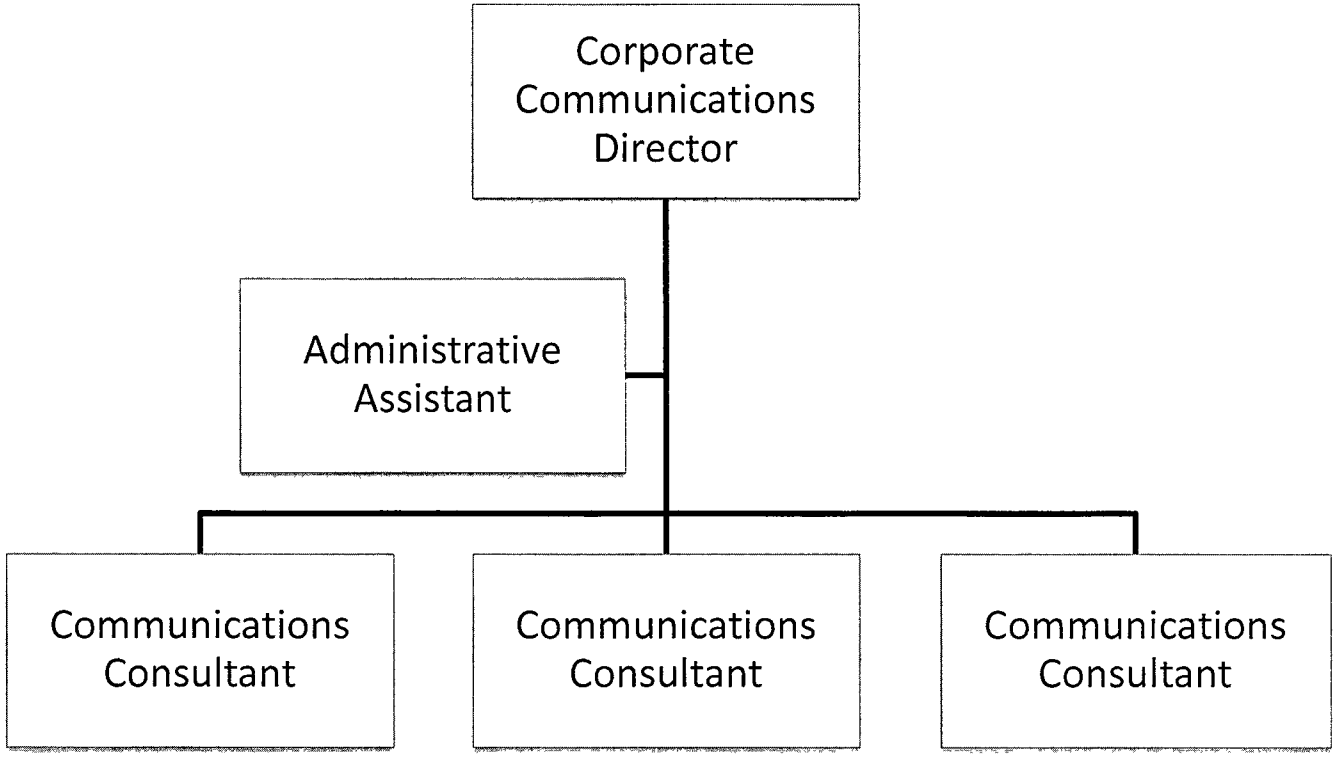


EXHIBIT BB-2

SOUTHWESTERN ELECTRIC POWER COMPANY
A unit of American Electric Power

# AEPSC Corporate Communications Organization Chart

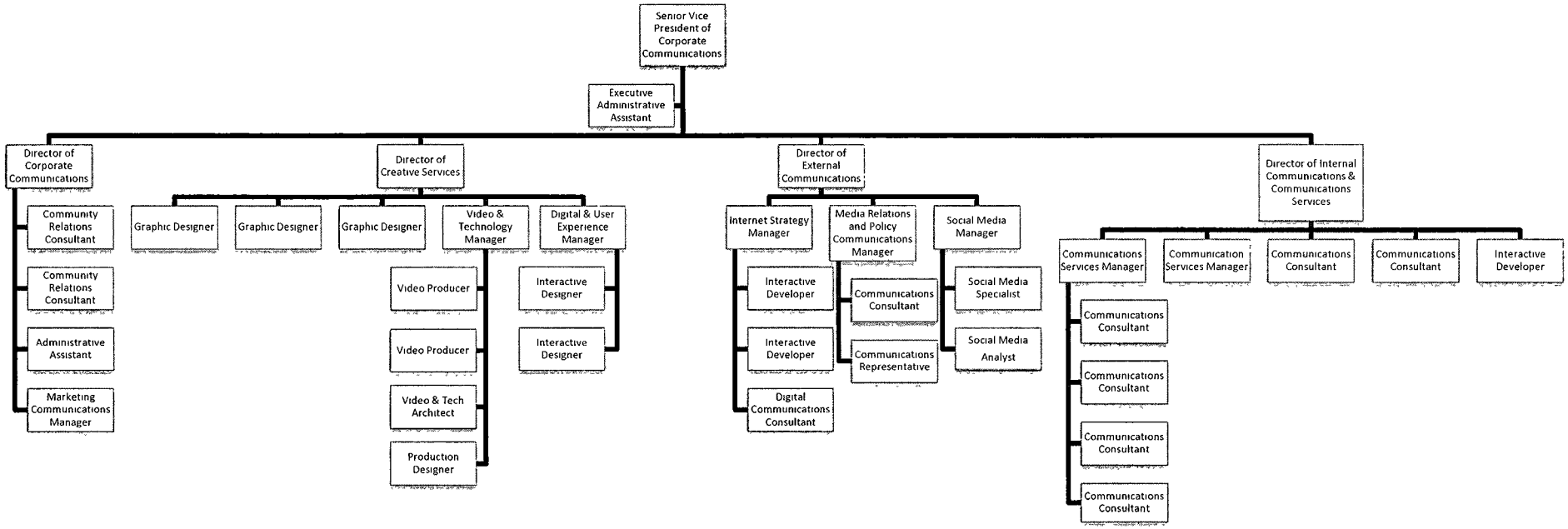


EXHIBIT BB-3

## EXECUTIVE SUMMARY OF PAUL M. EIDEN

Paul M. Eiden, Officer, Vice President, and Project Director with Sargent & Lundy LLC (S&L), supports the site-specific demolition studies conducted by S&L to estimate the costs of dismantling Southwestern Electric Power Company's (SWEPCO) electric generating stations. In this testimony, Mr. Eiden first explains why it is necessary to dismantle a generating station at the end of its useful life. He then discusses how the study was produced, explaining that the S&L demolition cost estimates are an update to the SWEPCO electric generating facility demolition cost estimates that S&L prepared in 2016.

The purpose of Mr. Eiden's testimony, and the attached 2020 demolition cost estimate, is to capture any changes at the SWEPCO facilities since 2016 that would affect demolition costs and to reflect current market prices for construction labor, scrap value, and other applicable costs. Unlike past demolition studies, which involved person-to-person interviews and plant site visits, S&L engaged with SWEPCO management and site representatives remotely to accommodate the health and safety precautions being taken as a result of the COVID-19 pandemic.

Mr. Eiden's testimony confirms that the demolition cost estimates were methodically developed using currently available data and input from SWEPCO personnel. S&L's approach is consistent with the process used to develop the 2016 study. The primary difference between the 2020 and the 2016 demolition cost studies is the increase in scrap value, which accounts for a $25,295,632 decrease in the net cost of demolition. The overall cost is further reduced by a decrease in contingency of $7,269,490. These reductions are partially offset by an increase in direct costs of $14,899,930, which is primarily driven by an increase in the cost of labor, construction equipment, and materials.

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

SOUTHWESTERN ELECTRIC POWER COMPANY

FOR AUTHORITY TO CHANGE RATES

DIRECT TESTIMONY OF

PAUL M. EIDEN

FOR

SOUTHWESTERN ELECTRIC POWER COMPANY

OCTOBER 2020

**1051**

TESTIMONY INDEX



EXHIBITS

## I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A. My name is Paul M. Eiden, and my business address is 55 East Monroe Street, Chicago, Illinois 60603. I am an Officer, Vice President, and Project Director with Sargent & Lundy LLC (S&L). S&L is a consulting engineering firm working mainly with electric utilities. S&L has provided consulting engineering services to the electric power utility industry for over 125 years.

Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I received a Bachelor of Science degree in Mechanical Engineering in 1990 from the University of Notre Dame and I joined S&L immediately after graduation. My experience includes a wide range of engineering and management duties in various positions related to the electric power industry.

I have 30 years of extensive experience in the design and engineering of major steam-electric generating facilities. Before assuming my current responsibilities, I served as a Project Manager for the firm. In that position, I provided management and overall direction for engineering, design, and related technical and/or support activities performed by all disciplines assigned to power plant projects. I planned, coordinated, and monitored the work of the various disciplines assigned to a project and communicated routinely and frequently with clients to develop a mutual understanding of client priorities and issues. I was also responsible for assuring that the work was planned and performed on schedule, within budget, and according to the agreed upon scope of work, with an emphasis on quality and client satisfaction.

I have worked on both domestic and international projects. My experience includes engineering, analysis, design, development of construction specifications, procurement, construction management, commissioning, and project management of multidisciplinary engineering activities for major power plant systems. My resume is provided as EXHIBIT PME-1, and more fully details my qualifications and extensive power plant experience.

Q. WHAT ARE YOUR RESPONSIBILITIES AS AN OFFICER, VICE PRESIDENT, AND PROJECT DIRECTOR WITH S&L?

A. I provide leadership and direction to all levels and all disciplines of the engineering and design organizations at S&L. Such leadership and direction ensures that S&L engineering and design deliverables, including demolition studies, meet our client's expectations, capture the scope of our assignments, are technically correct, and are of the highest quality. I ensure that S&L standards are continually updated so they reflect current industry codes, standards, and also capture current state-of-the-art vendor supplied equipment and components. My 30 years of performing detailed engineering and design assignments exclusively in the power generation industry, both nationally and internationally, has given me a strong foundation of experience from which to draw to make sure that S&L assignments are carried out in a technically correct manner with quality, budget, and schedule expectations achieved. My experiences include the design and construction of new full-scale power generation facilities, as well as upgrades to existing power generation facilities.

## II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony in this proceeding will address the results of the site-specific studies conducted by S&L to estimate the costs of dismantling Southwestern Electric Power Company's (SWEPCO of the Company) electric power generating facilities. I am sponsoring the 2020 demolition cost estimate studies (2020 Studies) contained in EXHIBIT PME-2, which includes demolition cost studies for the following SWEPCO generating facilities:

- Arsenal Hill Unit 5 and chimneys from Units 3 and 4
- Dolet Hills Power Station Unit 1
- Flint Creek Power Plant Unit 1
- Knox Lee Power Plant Units 1-5 and common
- Lieberman Units 1-4 and common
- Lone Star Unit 1 and peaker foundations
- Harry D. Mattison Power Plant Units 1-4 and common
- Henry W. Pirkey Power Plant Unit 1
- J. Robert Welsh Power Plant Units 1-3 and common
- Wilkes Power Plant Units 1-3 and common
- J Lamar Stall Plant Unit 6
- John W. Turk, Jr. Power Plant Unit 1.

## III. BACKGROUND

Q. WHY IS IT NECESSARY TO DISMANTLE A GENERATING FACILITY AT THE END OF ITS USEFUL LIFE?

A. There are a number of reasons. To reuse land, structures and facilities would need to be removed. Since the number of locations in the nation that are conducive to electric

generating facilities is limited, it is possible that after the retirement of the units, future generating facilities would be located at these sites to take advantage of existing substations, transmission lines, gas lines, rail lines, etc. Reuse of these locations would require removal of any previous structures. Also, there is a safety concern, and therefore a potential public risk, if security is not maintained at the facilities. If abandoned structures are not dismantled, the structures will deteriorate if not maintained. Some of the structures, such as exhaust stacks, could create potential public safety risks and have the potential to collapse and cause damage. Removal and disposal of asbestos is also required in any location where it exists.

Q. PLEASE BRIEFLY DESCRIBE HOW S&L PERFORMED ITS STUDIES OF THE COST OF DISMANTLING SWEPCO'S ELECTRICAL GENERATING FACILITIES.

A. S&L provided an update to the existing SWEPCO electric generating facility demolition studies prepared in 2016 by S&L. The purpose of this update was to capture any changes from the prior demolition study that may have occurred at the SWEPCO facilities that could affect demolition costs. Unlike past demolition studies, which involved person-to-person interviews and plant site visits, S&L engaged with SWEPCO management and site representatives remotely to prepare this demolition study. S&L gathered information regarding changes to site facilities and structures, which were then used to update the scope of work and assumptions in the 2020 Studies. This change in process was necessary to accommodate the health and safety precautions being taken as a result of the COVID-19 pandemic. The unique characteristics of each site were captured by reviewing general arrangement drawings,

previously documented aerial view drawings, and information provided by plant representatives. With the help of SWEPCO personnel and the aforementioned information, we were able to locate major facilities on site and the arrangement inside the power blocks, such as the boiler building, the turbine building, etc.

This data was reviewed in more detail to finalize the scope of the cost estimates and the assumptions that were used to develop the cost estimates. For example, in many instances, we assumed that there was sufficient room on site to dispose of all the non-hazardous debris. We assumed that it would not be necessary to remove the tens of thousands of feet of underground piping and wiring from the sites. Assumptions such as these minimize the demolition cost estimate and result in a reasonable cost estimate for dismantling the facility. This is not a "brick by brick" demolition cost estimate that assumes every single component is demolished in an inefficient manner. The use of these assumptions is consistent with the studies performed in 2016.

Our cost estimates were updated considering the data described above, in accordance with S&L's Quality Assurance Program and then reviewed with SWEPCO personnel. This process is consistent with that used to develop the 2016 demolition cost studies.

## IV. DEMOLITION COST ESTIMATE STUDIES

Q. PLEASE DESCRIBE THE STUDIES CONTAINED IN EXHIBIT PME-2.

A. As I mentioned, EXHIBIT PME-2 presents the demolition cost estimates for the generating facilities I listed at the outset of my testimony. The costs for demolition of structures, equipment, etc., are separately itemized for each generating facility in this

exhibit. The assumptions and commercial considerations used to develop the cost estimates are also identified in this exhibit.

Q. WHAT IS THE NET COST TO DISMANTLE THE COMPANY'S GENERATING FACILITIES INCLUDED IN THE 2020 STUDIES?

A. The total estimated cost to dismantle SWEPCO's generating facilities is $149,088,006 on a total cost basis and represents a decrease of $16,175,230 from the 2016 total estimated cost. The estimated costs to demolish these sites are summarized in Table 1 below:

**Table 1 – Estimated Net Demolition Cost for SWEPCO Generating Facilities**

| Plant | 2020 Estimate** | 2016 Estimate*** | Difference |
|---|---|---|---|
| Arsenal Hill Plant | $3,558,616 | $4,108,229 | ($549,613) |
| Dolet Hills Plant Unit 1 * | $26,697,448 | $31,253,403 | ($4,555,955) |
| Flint Creek Plant Unit 1 * | $15,159,129 | $11,079,050 | $4,080,079 |
| Knox Lee Plant Units 1-5 | $18,100,997 | $16,408,595 | $1,692,402 |
| Lieberman Plant Units 1-4 | $4,343,874 | $3,790,692 | $553,182 |
| Lone Star Plant Unit 1 | $2,037,558 | $2,913,791 | ($876,233) |
| H. D. Mattison Plant Units 1-4 | $4,192,897 | $3,477,308 | $715,589 |
| H. W. Pirkey Plant Unit 1 * | $19,702,687 | $28,606,943 | ($8,904,256) |
| J L Stall Plant Unit 6 | $3,936,421 | $2,332,018 | $1,604,403 |
| J W Turk Plant Unit 1 * | $19,786,548 | $23,782,932 | ($3,996,384) |
| J. R. Welsh Plant Units 1-3 | $24,129,069 | $26,397,700 | ($2,268,631) |
| Wilkes Plant Units 1-3 | $7,442,762 | $11,112,575 | ($3,669,813) |
| **Total** | **$149,088,006** | **$165,263,236** | ($16,175,230) |

* Estimated demolition costs for Dolet Hills, Flint Creek, Pirkey, and J. W. Turk include the entire facility; SWEPCO is a partial owner of each.
** Costs are in 2020 dollars
*** Costs are in 2016 dollars

Q. WHAT DO YOU MEAN BY THE TERM "ESTIMATED NET COST?"

A. By the term "estimated net cost," I mean the estimated cost to dismantle the specific generating facility after crediting the estimated positive salvage value for certain materials.

Q PLEASE EXPLAIN THE DIFFERENCES IN ESTIMATED DEMOLITION COSTS REFLECTED IN THE UPDATED STUDIES WHEN COMPARED TO THE 2016 STUDIES.

A. At a high level, the primary difference between the 2020 Studies and the 2016 demolition cost studies is the increase in scrap value, which accounts for a $25,295,632 decrease in the net cost of demolition. The overall cost is further reduced by a decrease in contingency of $7,269,490, which I explain later in my testimony. These reductions are partially offset by an increase in direct costs of $14,899,930, which is primarily driven by an increase in the cost of labor, construction equipment, and materials.

Q. PLEASE DESCRIBE HOW THE VALUE OF SCRAP WAS DETERMINED IN THE STUDIES.

A. S&L used industry-wide publications to estimate the cost of scrap materials. The value of scrap was determined by data available at the time of the cost estimate using the Scrap Metals Market Watch[1], a recognized publication that presents the market current market value of various scrap materials. The demolition cost estimates consider various scrap metals such as steel and copper based on the volume of materials at each plant site.

[1] www.americanrecycler.com

Q. PLEASE GENERALLY DESCRIBE THE SCRAP METAL MARKET.

A. The price of scrap metal is determined by a mature market and prices are governed by regional demand, imports, and economic conditions. The price of scrap material has been extremely volatile in recent years. EXHIBIT PME-3 demonstrates the volatility and overall decrease in scrap value since the third quarter of 2011 for SWEPCO's scrap metal region. As shown in EXHIBIT PME-3, scrap value markedly decreased from 2012 to 2016, but prices have somewhat recovered for most applicable materials since 2016. For purposes of the 2020 Studies, higher scrap value results in a lower net cost of demolition.

Q. PLEASE EXPLAIN WHY THE VALUE OF SCRAP IS HIGHER IN THE 2020 STUDIES, WHEN COMPARED TO 2016.

A. In addition to an uptick in scrap prices, the 2016 demolition cost studies included a separation cost deduction in addition to a transportation cost deduction. Upon further examination, S&L found that the separation cost deduction was not necessary. Removal of the separation cost deduction in the 2020 Studies contributed to an overall increase in scrap value, when compared to the 2016 demolition cost studies.

Q. ARE THE SCRAP METAL PRICES REASONABLE?

A. Yes. The prices and value of scrap metal contained in the 2020 Studies reflect the current realities of the scrap metal market, and were determined using a substantially similar methodology to that used by S&L in previous years to estimate the net cost of demolition for these facilities.

Q. WILL ANY OF THE MATERIALS IN THE GENERATING FACILITIES PROVIDE A POSITIVE SALVAGE VALUE?

A. Yes. We have estimated the amounts of recoverable materials such as steel and copper in each of the facilities. In EXHIBIT PME-2, the estimated total salvage value is shown as a credit to the cost of dismantling the facilities.

Q. WAS AN ALLOWANCE INCLUDED FOR INDIRECT EXPENSES AT THE GENERATING FACILITIES STUDIED BY S&L?

A. Yes. These amounts are intended to capture SWEPCO's administrative and overhead costs associated with the dismantling of the generating facilities. This is intended to cover such costs as obtaining permits; construction services such as water and electricity; security facilities; and additional expenses such as engineering assistance, particularly for complex dismantling.

Q. WHAT METHOD WAS USED TO DETERMINE THE VALUE OF INDIRECT EXPENSES?

A. Based upon S&L's more than 125 years of experience, its experience with numerous projects of similar complexity, and discussions with SWEPCO's engineering personnel, S&L used 10% of the direct construction costs as a reasonable estimate for these indirect expenses.

Q. DID S&L APPLY AN ESCALATION FACTOR TO THESE ESTIMATES?

A. No. All of the current estimates are in 2020 dollars.

Q. HAVE THE DEMOLITION STUDIES CONDUCTED BY S&L BEEN FOUND TO BE REASONABLE BY THIS COMMISSION?

A. Yes. S&L used a substantially similar approach to develop its demolition cost estimates for this proceeding as it did for SWEPCO in Docket No. 46449. In its Final Order dated January 11, 2018 in Docket No. 46449, this Commission found in its Finding of Fact

Number 177 that "*The plant demolition studies SWEPCO used to develop terminal removal cost and salvage for each of SWEPCO's generating facilities, when adjusted to account for a 10% contingency factor, are reasonable.*"

Q. WHY DID THE COMMISSION MAKE AN ADJUSTMENT TO THE CONTINGENCY AMOUNT USED BY S&L IN DOCKET NO. 46449?

A. The Commission adjusted the contingency amount from 15%, which had been consistently used in previous SWEPCO base rate case filings, to 10% based on the fact that Commission rules allow a maximum contingency factor of 10% for the demolition of a nuclear power plant, which the Commission determined was more complex and risky than the demolition of SWEPCO's natural gas and coal power plants.

Q. DOES S&L AGREE THAT A 10% CONTINGENCY FACTOR IS APPROPRIATE FOR SWEPCO'S GENERATING FACILITY DEMOLITION COST ESTIMATES?

A. Based on the level of detail used to estimate the SWEPCO generating facilities demolition costs, S&L believes a contingency factor of 15% is appropriate. However, in response to the aforementioned Commission finding, S&L has reduced the contingency factor included in the 2020 Studies to 10% to comply with Commission precedent.

Q. ARE THE DEMOLITION TECHNIQUES USED IN PREPARATION OF THE S&L DEMOLITION COST ESTIMATES EFFICIENT AND COST EFFECTIVE?

A. Yes. The demolition techniques and crew mixes assumed in the S&L cost estimates are efficient and cost effective. They are typical demolition techniques that are used in the industry and are comparable to techniques used by major demolition contractors who have competitively bid and successfully executed the subject work for many years.

Q. WHAT IS YOUR OPINION CONCERNING THE REASONABLENESS OF THE ESTIMATES OF DEMOLITION COSTS CONTAINED IN EXHIBIT PME-2?

A. In my opinion, these estimates were carefully prepared, using standard and accepted estimating techniques, the best information available, and industry experience. I believe the conservative assumptions made in the 2020 Studies are reasonable.

Q. WHAT IS YOUR UNDERSTANDING OF HOW SWEPCO USES S&L'S DEMOLITION STUDIES IN THIS RATE CASE?

A. I understand that SWEPCO witness Jason A. Cash uses these studies to determine net salvage values for calculating production plant depreciation rates.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

# PAUL M. EIDEN

## Summary

Since joining Sargent & Lundy in 1990, Mr. Eiden has provided an array of engineering services, being named Project Director in 2016 and functioning as Project Manager since 2009. His work has spanned all phases of projects, from conceptual design for cost estimates and feasibility studies, to detailed design, procurement, construction oversight, commissioning, and performance testing. Mr. Eiden has significant experience with gas turbines in simple cycle, combined cycle, and repowering configurations. He is also proficient in coal fired plant modifications and environmental upgrades. He has performed lead roles in new generation projects, for major retrofits at existing plants, and in investigative studies.

## Education

University of Notre Dame - B.S. Mechanical Engineering - 1990

## Registrations

Professional Engineer – Arkansas, Illinois, Minnesota, Nebraska, Wyoming

## Proficiencies

- Project management
- Engineering management
- Fossil plant design and betterment
- Conceptual design and cost estimates for fossil plants and environmental retrofits
- Siting and development studies for combustion turbine and repowering projects
- Mechanical engineering – system design, equipment sizing and specification
- Plant performance testing for combined cycle and simple cycle plants

## Responsibilities

Mr. Eiden works closely with power industry clients to provide project management, engineering, procurement, construction management, commissioning, and consulting solutions.

As Project Director, Mr. Eiden is responsible for the satisfactory implementation of Sargent & Lundy's work in accordance with quality, schedule, and budget criteria for power generation projects. This work includes natural gas, oil, coal, and renewable energy. Mr. Eiden is responsible to define the project needs, develop an execution plan, and mobilize Sargent & Lundy's team. He consults with the client and project personnel in scheduling the assignment and developing appropriate project control systems. He works jointly with the client and the project team to set project objectives, design parameters, and operating philosophies. Mr. Eiden regularly interfaces with client management regarding Sargent & Lundy's performance and the status of engineering and construction progress, while leading the project from inception through completion.

# PAUL M. EIDEN

## Sargent & Lundy Experience

***El Paso Electric | 2019 to present***

Newman Combustion Turbine Project, natural gas, 210 MW. Project Director for the detailed design of a plant expansion adding one gas-fired combustion turbine generator. The scope of work includes detailed design and technical procurement support for the generation equipment, emission controls, fuel supply, mechanical and electrical balance of plant components, civil works, and electrical transmission.

***Tucson Electric Power | 2017 to present***

Sundt Generation Modernization Project, natural gas, 185 MW. Project Director for the detailed design of a plant expansion consisting of ten new natural gas-fired reciprocating internal combustion engines (RICE). The scope of work includes detailed design and technical procurement support for mechanical and electrical process and balance of plant interconnects, civil works, electrical transmission, and control interface.

***Eastern Generation | 2016 to present***

Astoria, Gowanus, Narrows, and Covert Generating Stations Gas boilers, simple cycle, and combined cycle units. Project Director for various plant modifications and upgrade conceptual studies.

***Clean Energy Future – Lordstown | 2016 to 2018***

Lordstown Energy Center, combined cycle, natural gas, 940 MW. Project Director as Owner's Engineer for a greenfield 2x1 combined cycle plant utilizing Siemens SGT6-8000H gas turbines. Services include technical design reviews for the power block, switchyard, gas supply, and water lines. Additional responsibilities encompass construction oversight, schedule monitoring, and vendor surveillance of key equipment.

***Competitive Power Ventures | 2015 to 2019***

Three Rivers Energy Center, combined cycle, natural gas, 1100 MW. Project Director supporting development of a new combined cycle facility using GE 7HA gas turbines. The initial phase of this project developed emission calculations, modeling, and control technology evaluations used for preparing the major air, water, and wastewater permit applications. This scope of work continues through agency review and consultations. Project tasks also include the conceptual design of the electrical transmission system with an interconnect study and cost estimates, covering the plant switchyard, transmission tie-in power lines, and potential system upgrades.

***Exelon Power | 2016***

Grand Prairie, simple cycle, gas, 100 MW. Project Director for a fuel gas system upgrade. The assignment began with an analysis of combustion turbine trips and determining a cost-effective correction with a short lead time and minimal outage duration. Sized and specified new equipment and developed the installation details.

***American Electric Power / Southwest Electric Power Company***

- 2012 to 2016 | Welsh 1 and 3, coal, 525 MW. Project Manager for plant upgrades in response to the Mercury Air Toxics Standard. The project includes engineering, design, and procurement support of

new activated carbon injection systems, fabric filters, ID fans, stack, and major DCS control system upgrades.

- 2012 to 2016 | Flint Creek 1, coal, 525 MW. Project Manager for plant upgrades for new emissions control equipment. The project includes engineering, design, and procurement support of a dry scrubber, fabric filter, activated carbon injection system, ID fans, and major DCS control system upgrades.
- 2015-2016 | Various sites; gas, solar, and wind facilities in various sizes. Project Manager for site selection studies. The studies investigated new generation options at numerous locations in several states. Multiple technologies were considered: gas plants in simple cycle, combined cycle, and reciprocating engine arrangements; utility-scale photovoltaic; and wind. Sites were evaluated for gas supply, solar irradiation, wind conditions, water availability, transmission capacity, and land development requirements. Plant performance, layouts, and schedules were generated along with reviews of environmental and regulatory issues.

***NV Energy***

- 2009 to 2012 | North Valmy 1 and 2, coal, 500 MW. Project Manager for Unit 1 cooling tower replacement and numerous studies, including SCR addition, wet FGD addition (Unit 1), bottom ash system modifications, primary air fan noise reduction (Unit 2), and circulating water dry chemical feed modifications.
- Fort Churchill 1 and 2, combined cycle, 226 MW total
- 2010 to 2011 | Tracy 3, combined cycle, 108 MW. Project Manager for study to determine impacts of cycling duty on various systems and equipment and recommend modifications to improve each unit's cycling capability. Study includes consideration of cycling effects on equipment life, maintenance, and operation.
- 2010 to 2011 | Tracy 3, combined cycle, 108 MW. Project Manager for study to determine impacts of cycling duty on various systems and equipment and recommend modifications to improve each unit's cycling capability. Study includes consideration of cycling effects on equipment life, maintenance, and operation.
- 2009 to 2010 | Reid Gardner 1-4, coal, 550 MW. Project Manager for boiler water treatment system replacement and studies for SCR addition and FGD system assessment.

***Xcel Energy***

- 2006 to 2009 | Riverside, combined cycle, natural gas, 450 MW, General Electrical 7FA combustion turbine. Project Manager for engineering close-out activities including construction, start-up, and testing support. Lead mechanical engineer for design of a 2x1 facility with a re-powered steam turbine and once through cooling. System engineering and mechanical equipment procurement.

***FirstEnergy***

- 2004 to 2006 | Bruce Mansfield 1, 2 and 3, coal, 2500 MW. Lead mechanical engineer for forced oxidation gypsum and FGD wastewater treatment expansion project.

# PAUL M. EIDEN

***PSEG Power, New York, Inc.***

- 2002 to 2004| Bethlehem Energy Center, combined cycle, natural gas and fuel oil, 750 MW, General Electric 7FA combustion turbines. Lead mechanical engineer for the design of a new 3x1 facility with reheat, three-pressure level steam generators, and a counter flow, wet/dry cooling tower. System engineering and mechanical equipment procurement.

***Reliant Energy***

- 2000 to 2002 | Equistar, combined cycle cogeneration, natural gas, 800 MW, Siemens Westinghouse 501 F combustion turbines. Mechanical engineering for the scoping, pricing, design, and construction of a new 4x1 cogeneration facility. System design of the steam, feedwater, and boiler blowdown systems. Sizing, specification preparation, bid evaluation, and vendor design reviews for the heat recovery steam generators, feedwater pumps, steam conditioning valves, and various piping specialties. Procedure development, witness testing, and calculation preparation for output, heat rate, and steam export performance test.
- 2000 – 2002 | Aurora, simple cycle, natural gas, 950 MW, General Electric 7FA and LM6000 combustion turbines. Mechanical system design, equipment layout, and pipe routing oversight for the design and construction of a new ten (10) turbine simple cycle facility. Vendor document review and system interface coordination for the combustion turbines. Procedure development, test instrument specification, witness testing, and calculation preparation for generator output and heat rate performance tests.
- 1998 to 2000 | El Dorado combined cycle, natural gas, 500 MW, Siemens Westinghouse 501F combustion turbine. Mechanical engineering for the design and construction of a new 2x1 facility. System design of closed loop cooling system. System design of steam drains into a collection flash tank. Participation in steam turbine water induction prevention study. Vendor design review of steam turbine, combustion turbine, air-cooled condenser (ACC), and heat recovery steam generators. Sizing, specification preparation and bid evaluation for ACC, steam turbine bypass valves, fin-fan cooler, air compressors, pumps, and pipe insulation. Development of overall plant startup sequence. Procedure development, witness testing and calculation preparation for net output and net heat rate performance test.
- 2001 | Hunterstown, combined cycle, natural gas, 750 MW, General Electric 7FB combustion turbines
- 2001 | Choctaw County, combined cycle, natural gas, 750 MW, General Electric 7FB combustion turbines. Owner's engineer conducting the design review of two new 3x1 facilities.
- 2001 | Bakersfield, simple cycle, natural gas, 25 MW General Electric LM2500 combustion turbine. Project management for the feasibility and cost study to restart an abandoned unit. The combined cycle arrangement would be replaced with a refurbished combustion turbine in simple cycle operation with upgraded emission controls and connected to an existing switchyard.

***Huaneng Power International***

- 1995 to 1997 | Dandong 1 and 2, coal, 2x350 MW

PAUL M. EIDEN

- 1995 to 1997 | Dalian 3 and 4, coal, 2x350 MW. Procurement activities for four new units including specification preparation and bid evaluation for mechanical equipment, commodities, and water treatment systems. Coordinated system interfaces and design review of water treatment systems, including demineralized water production, wastewater treatment, condensate water deironing, and electro-chlorination production and injection.

## Publications

- "Xcel Energy Riverside Repowering Project ," (coauthor), Power-GEN 2009 Conference – Gas Turbine Technologies Track, Las Vegas, Nevada, December 2009 (earned best paper award)
- "Making Existing Combined Cycles Meet the Challenges of the New System Reality," (coauthor), Power-GEN 2012 Conference, Orlando, Florida, December 2012


Arsenal Hill Plant Unit 5

# CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0


55 East Monroe Street
Chicago, IL 60603-5780 USA

| Revision Number | Date | Purpose | Prepared By | Reviewed By | Approved By | Pages Affected |
|---|---|---|---|---|---|---|
| A | 7/14/20 | Comments | G. Amen | B. Andric | | All |
| 0 | 8/19/20 | Use | G. Amen | B. Andric | A. Redd | All |

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## 1.0 INTRODUCTION

The Arsenal Hill Plant located near Shreveport, Louisiana in Caddo County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of one gas fired generating unit, Unit 5, with a total generating capacity of 125 megawatts. The Units was placed in operation in 1960. The plant also includes the structures from previous operating Units 3 & 4 (generating equipment removed previously) and the associated chimneys.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Arsenal Hill Plant Unit 5 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Arsenal Hill Plant Unit 5 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

## 2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24250F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

**Table 2-1**
**Cost Estimate Code of Accounts**

| Account Number | Description |
|---|---|
| 10 | Demolition Costs |
| 18 | Scrap Value Costs |
| 21 | Civil Work Costs |
| 22 | Concrete Work Costs |
| 90, 91, 92 | General Conditions Costs |
| 93 | Indirect Costs |
| 94 | Contingency Costs |
| 96 | Escalation Costs |

The results of the cost estimate are provided in Table 2-2 below:

**Table 2-2**
**Cost Estimate Results Summary**

| Description | Total Cost |
|---|---|
| Demolition Direct Cost | $ 3,202,727 |
| Scrap Value | ($ 1,474,111) |
| General Conditions Cost | $ 834,700 |
| Indirect Cost | $ 403,700 |
| Contingency Cost | $ 591,600 |
| Total Project Cost | $ 3,558,616 |

## 3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete removal of Arsenal Hill Unit 3 Chimney, Unit 4 Chimney, and Unit 5 generating facility and plant common services associated with the unit. Common facilities include:

- Crib House
- Fuel Oil Storage Tank
- Water Treatment Building
- Heating Boilers
- Unneeded Roadways

The following are excluded from the scope of the conceptual demolition cost estimate:

- Asbestos Removal
- Switchyard
- Removal of the cooling pond. The cooling pond is to be left in place
- Removal of the spray pond. No work is required in the spray pond
- Demolition of Unit 3 and 4 structures. Unit 3 and 4 structures are used by System Shops

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Unit 5 Condenser tubes have been replaced with 316 SS Tubes

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

## 4.0 COMMERCIAL BASIS

### 4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Arsenal Hill Plant is a conceptual estimate of the cost to dismantle the Arsenal Hill Plant Unit 3 Chimney, Unit 4 Chimney and Unit 5 generating plant. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work). All items identified above will be demolished at the same time.

### 4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

### 4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Shreveport, Louisiana as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

#### 4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

#### 4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material

- Contractor's General and Administrative Costs
- Contractor's Profit

## 4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton

Note: 1 Ton = 2,000 Lbs

## 4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

## 4.6 Escalation

No allowance for escalation was included in the cost estimate.

## 4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

## 4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Emergency or Black Start Diesels are not included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- The existing cooling pond is to be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

## 5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

**Table 5-1**
**Reference Drawings**

| Document Number | Revision/Date/Job No. | Title |
|---|---|---|
| B-99 | | Floor Loading Diagrams, Unit 5 |
| M-154 | 12/11/58 | Property Plat |
| M-155 | Rev C | General Arrangement Main Floor Plan, Unit 5 |
| M-156 | 12/11/58 | General Arrangement Basement Floor Plan, Unit 5 |
| M-157 | Rev D | General Arrangement Miscellaneous Plans, Unit 5 |
| M-158 | Rev D | General Arrangement Cross Section, Unit 5 |
| M-159 | 12/11/58 | General Arrangement Long Section, Turbine Room, Unit 5 |
| M-160 | 12/11/58 | General Arrangement Long Section, Pump Bay, Unit 5 |
| M-161 | | Layout for Dismantling Turbine & Generator, Unit 5 |
| SL-1696 | JOB 2649 | Unit 5 Equipment Data |

# EXHIBIT 1
# Arsenal Hill Plant Unit 5
# Conceptual Demolition Cost Estimate No. 24250F

**AEP SWEPCO**
**ARSENAL HILL POWER STATION**
**DEMOLITION COST ESTIMATE**

| | |
|---|---|
| **Estimator** | GA |
| **Labor rate table** | 20LASHR |
| **Project No.** | A13351.021 |
| **Estimate Date** | 8/19/20 |
| **Reviewed By** | BA |
| **Approved By** | BA |
| **Estimate No.** | 24250F |

Estimate No 24250F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/App GA/BA/BA

AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

| Area | Description | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|
| A | UNIT 3 | 450 000 | | | 1 141 | 54,745 | 24,484 | 529 229 |
| B | UNIT 4 | 450,000 | | | 1 141 | 54 745 | 24 484 | 529,229 |
| C | UNIT 5 | | (1 326,537) | | 19 179 | 846 878 | 416 118 | (63 542) |
| D | COMMON FACILITIES | 80,028 | (147 574) | 282,100 | 6,324 | 284,758 | 170 327 | 869,639 |
| E | COMMON FACILITIES | | | | 1,000 | 41,620 | 22,440 | 64,060 |
| | **TOTAL DIRECT** | **980,028** | **(1,474,111)** | **282,100** | **28,784** | **1,282,746** | **657,853** | **1,728,615** |

Estimate No 24250F
Project No A13351.021
Estimate Date 8/19/20
Prep/Rev/App GA/BA/BA

AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

## Estimate Totals

| Description | Amount | Totals | Hours |
|---|---|---|---|
| Labor | 1,282,746 | | 28,784 |
| Material | 282,100 | | |
| Subcontract | 980,028 | | |
| Construction Equipment | 657,853 | | |
| Scrap Value | (1,474,111) | | |
| | 1,728,616 | 1,728,616 | |
| **General Conditions** | | | |
| **Additional Labor Costs** | | | |
| 90-1 Labor Supervision | 77,000 | | |
| 90-2 Show up Time | 25,700 | | |
| 90-3 Cost Due To OT 5-10's | | | |
| 90-4 Cost Due To OT 6-10's | | | |
| 90-5 Per Diem | | | |
| **Site Overheads** | | | |
| 91-1 Construction Management | 138,500 | | |
| 91-2 Field Office Expenses | 30,500 | | |
| 91-3 Material&Quality Control | | | |
| 91-4 Site Services | | | |
| 91-5 Safety | 27,400 | | |
| 91-6 Temporary Facilities | 20,800 | | |
| 91-7 Temporary Utilities | | | |
| 91-8 Mobilization/Demob | 21,900 | | |
| 91-9 Legal Expenses/Claims | 3,200 | | |
| **Other Construction Indirects** | | | |
| 92-1 Small Tools & Consumables | 13,900 | | |
| 92-2 Scaffolding | | | |
| 92-3 General Liability Insur | 13,900 | | |
| 92.4 Constr Equip Mob/Demob | 6,600 | | |
| 92-5 Freight on Material | 14,100 | | |
| 92-6 Freight on Scrap | | | |
| 92-7 Sales Tax | | | |
| 92-8 Contractors G&A | 181,600 | | |
| 92-9 Contractors Profit | 259,600 | | |
| | 934,700 | 2,663,316 | |
| **Project Indirect Costs** | | | |
| 93-1 Engineering Services | | | |
| 93.2 CM Support | | | |
| 93-3 Start-Up/Commissioning | | | |
| 93-4 Start-Up/Spare Parts | | | |
| 93-5 Excess Liability Insur | | | |
| 93-6 Sales Tax On Indirects | | | |
| 93-7 Owners Cost | 403,700 | | |
| 93.8 EPC Fee | | | |
| | 403,700 | 2,967,016 | |
| **Contingency** | | | |
| 94-1 Contingency on Const Eq | 77,600 | | |
| 94-3 Contingency on Material | 34,700 | | |
| 94-4 Contingency on Labor | 193,500 | | |
| 94-5 Contingency on Subcontr | 98,000 | | |
| 94-6 Contingency on Scrap | 147,400 | | |
| 94-7 Contingency on Indirect | 40,400 | | |
| | 591,600 | 3,558,616 | |
| **Escalation** | | | |
| 96-1 Escalation on Const Equip | | | |
| 96-3 Escalation on Material | | | |
| 96-4 Escalation on Labor | | | |
| 96-5 Escalation on Subcontract | | | |
| 96-6 Escalation on Scrap | | | |
| 96-7 Escalation on Indirects | | | |
| | | 3,558,616 | |
| 98 Interest During Constr | | | |
| | | 3,558,616 | |
| **Total** | | **3,558,616** | |

Estimate No 24250F
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AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

| Area | Group | Phase | Description | Notes | Quantity | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | **UNIT 3** | | | | | | | | | |
| | 10 00 00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | | 10 22 00 | CONCRETE | | | | | | | | | |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE) | 970 00 CY | | - | | 1,091 | 52,369 | 23 636 | 76 006 |
| | | | CONCRETE | | | | | | 1 091 | 52,369 | 23 636 | 76,006 |
| | | 10 25 00 | CONCRETE CHIMNEY & STACK | | | | | | | | | |
| | | | CONCRETE CHIMNEY NO LINER DEMOLITION TOP-TO-BOTTOM, PIECE-MEAL, NON EXPLOSIVE METHOD | 294 FT TALL X 26 FT AT BASE | 1 00 LS | 450 000 | - | | | | | 450 000 |
| | | | CONCRETE CHIMNEY & STACK | | | 450,000 | | | | | | 450,000 |
| | | | WHOLE PLANT DEMOLITION | | | 450,000 | | | 1 091 | 52 369 | 23 636 | 526,006 |
| | 21 00 00 | | CIVIL WORK | | | | | | | | | |
| | | 21 17 00 | EARTHWORK, EXCAVATION | | | | | | | | | |
| | | | EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE | | 329 00 CY | - | - | | 49 | 2 376 | 847 | 3 224 |
| | | | EARTHWORK, EXCAVATION | | | | | | 49 | 2,376 | 847 | 3,224 |
| | | | CIVIL WORK | | | | | | 49 | 2,376 | 847 | 3,224 |
| | | | **A UNIT 3** | | | **450,000** | | | **1,141** | **54,745** | **24,484** | **529,229** |
| B | | | **UNIT 4** | | | | | | | | | |
| | 10 00 00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | | 10 22 00 | CONCRETE | | | | | | | | | |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE) | 970 00 CY | - | - | | 1 091 | 52 369 | 23,636 | 76,006 |
| | | | CONCRETE | | | | | | 1 091 | 52,369 | 23,636 | 76,006 |
| | | 10 25 00 | CONCRETE CHIMNEY & STACK | | | | | | | | | |
| | | | CONCRETE CHIMNEY NO LINER DEMOLITION TOP-TO-BOTTOM, PIECE-MEAL, NON-EXPLOSIVE METHOD | 294 FT TALL X 26 FT AT BASE | 1 00 LS | 450 000 | - | | | | | 450 000 |
| | | | CONCRETE CHIMNEY & STACK | | | 450,000 | | | | | | 450 000 |
| | | | WHOLE PLANT DEMOLITION | | | 450 000 | | | 1,091 | 52,369 | 23,636 | 526,006 |
| | 21 00 00 | | CIVIL WORK | | | | | | | | | |
| | | 21 17 00 | EARTHWORK, EXCAVATION | | | | | | | | | |
| | | | EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE | | 329 00 CY | - | - | | 49 | 2 376 | 847 | 3 224 |
| | | | EARTHWORK, EXCAVATION | | | | | | 49 | 2,376 | 847 | 3,224 |
| | | | CIVIL WORK | | | | | | 49 | 2 376 | 847 | 3 224 |
| | | | **B UNIT 4** | | | **450,000** | | | **1,141** | **54,745** | **24,484** | **529,229** |
| C | | | **UNIT 5** | | | | | | | | | |
| | 10 00 00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | | 10 22 00 | CONCRETE | | | | | | | | | |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | DRAFT EQUIPMENT ON FRAME | CY | - | - | | | | | |
| | | | MAIN POWER BLOCK FOUNDATION | | 1 095 00 CY | - | - | | 924 | 44 351 | 20 018 | 64,369 |
| | | | ELEVATED CONCRETE FLOOR / ROOF | | 338 00 CY | - | - | | 202 | 9 716 | 4 385 | 14 101 |
| | | | TURBINE PEDESTAL | | 992 00 CY | - | - | | 1 786 | 85 691 | 38 676 | 124 367 |
| | | | PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF | BOILER ROOM | 2 900 00 SF | - | - | | 44 | 2,007 | 1 364 | 3 371 |
| | | | PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF | TURBINE ROOM | 7 540 00 SF | - | - | | 113 | 5 217 | 3 547 | 8 764 |
| | | | PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF | CONTROL ROOM | 900 00 SF | - | - | | 14 | 623 | 423 | 1 046 |
| | | | CONCRETE | | | | | | 3,082 | 147,605 | 68,414 | 216 019 |
| | | 10 23 00 | STEEL | | | | | | | | | |
| | | | STRUCTURAL, GIRT AND GALLERY STEEL | | 1,031 00 TN | - | - | | 1 047 | 47 630 | 16 928 | 64,557 |
| | | | STEEL | | | | | | 1,047 | 47,630 | 16 928 | 64,557 |
| | | 10 24 00 | ARCHITECTURAL | | | | | | | | | |
| | | | MASONRY WALLS | | 15 040 00 SF | - | - | | 120 | 5,278 | 3 287 | 8 566 |
| | | | ARCHITECTURAL | | | | | | 120 | 5,278 | 3,287 | 8 566 |
| | | 10 25 00 | CONCRETE CHIMNEY & STACK | | | | | | | | | |

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AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

| Area | Group | Phase | Description | Notes | Quantity | Subcontract Cost | Scrap Value | Material Cost | Man-Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 25 00 | CONCRETE CHIMNEY & STACK | | | | | | | | | |
| | | | STEEL STACK 2 EACH, 5 5 FT DIA X 11 FT TALL AND 48 FT TALL | | 33 00 TN | - | - | | 67 | 2,781 | 1,500 | 4 281 |
| | | | CONCRETE CHIMNEY & STACK | | | | | | 67 | 2,781 | 1,500 | 4,281 |
| | | 10 26 00 | MISCELLANEOUS STRUCTURAL ITEM | | | | | | | | | |
| | | | ELEVATOR | | 1 00 EA | - | - | | 150 | 6,243 | 3,366 | 9 609 |
| | | | MISCELLANEOUS STRUCTURAL ITEM | | | | | | 150 | 6 243 | 3 366 | 9 609 |
| | | 10 31 00 | MECHANICAL EQUIPMENT | | | | | | | | | |
| | | | MAIN BOILER AND APPURTENANCES, INCL ID FD FANS AND MOTORS | | 2,400 00 TN | - | - | | 4 860 | 220,984 | 104,636 | 325 620 |
| | | | STEAM TURBINE GENERATOR | | 606 00 TN | - | - | | 1 227 | 51,074 | 27 537 | 78,611 |
| | | | FLUES AND DUCTS INCL BREACHING | | 500 00 TN | - | - | | 1,350 | 61,385 | 29 066 | 90 450 |
| | | | FEEDWATER SYSTEM DEAERATING EQUIPMENT | | 100 00 TN | - | - | | 203 | 8,428 | 4 544 | 12 972 |
| | | | MISCELLANEOUS SMALL TANKS | | 50 00 TN | - | - | | 135 | 5 619 | 3,029 | 8 648 |
| | | | TURBINE ROOM OH CRANE 100/20 TON | | 1 00 LS | - | - | | 267 | 12,140 | 4 315 | 16 455 |
| | | | MISCELLANEOUS EQUIPMENT | | 130 00 TN | - | - | | 263 | 10 956 | 5 907 | 16 864 |
| | | | TURBINE ROOM GANTRY CRANE 5 TON | | 1 00 LS | - | - | | 28 | 1 273 | 452 | 1 726 |
| | | | CONDENSER | | 194 00 TN | - | - | | 393 | 16 350 | 8,816 | 25 166 |
| | | | CIRCULATING WATER SYSTEM EQUIPMENT | INCLUDING INTAKE RACKS | 350 00 TN | - | - | | 709 | 29,498 | 15 904 | 45 403 |
| | | | CIRCULATING WATER SYSTEM EQUIPMENT | 20 TON GANTRY CRANE | 30 00 TN | - | - | | 61 | 2 528 | 1 363 | 3 892 |
| | | | MECHANICAL EQUIPMENT | | | | | | 9,495 | 420 237 | 205,570 | 625,806 |
| | | 10 34 00 | HVAC | | | | | | | | | |
| | | | MAIN BUILDING HVAC | | 1 00 LT | - | - | | 335 | 13 943 | 7 517 | 21 460 |
| | | | HVAC | | | | | | 335 | 13,943 | 7,517 | 21 460 |
| | | 10 35 00 | PIPING | | | | | | | | | |
| | | | PIPING VALVES AND HANGERS | BOILER AND TURBINE PLANT | 350 00 TN | - | - | | 709 | 29 498 | 15 904 | 45 403 |
| | | | CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS | | 1 00 LT | - | - | | 600 | 24 972 | 13 464 | 38 436 |
| | | | PIPING, VALVES AND HANGERS | BOP | 140 00 TN | - | - | | 284 | 11 799 | 6 362 | 18,161 |
| | | | PIPING | | | | | | 1,592 | 66,269 | 35,730 | 102,000 |
| | | 10 41 00 | ELECTRICAL EQUIPMENT | | | | | | | | | |
| | | | LIGHT FIXTURE | | 950 00 EA | - | - | | 380 | 15 816 | 8 527 | 24 343 |
| | | | MISCELLANEOUS ELECTRICAL EQUIPMENT | GENERATOR BUS INCLUDED | 152 00 TN | - | - | | 542 | 22,540 | 12 153 | 34 693 |
| | | | ELECTRICAL EQUIPMENT | | | | | | 922 | 38 356 | 20 680 | 59,036 |
| | | 10 42 00 | RACEWAY, CABLE TRAY, & CONDUIT | | | | | | | | | |
| | | | CONDUIT | | 107 00 TN | - | - | | 696 | 28 947 | 15 607 | 44,554 |
| | | | CABLE TRAY | | 107 00 TN | - | - | | 642 | 26 720 | 14,406 | 41 127 |
| | | | RACEWAY, CABLE TRAY, & CONDUIT | | | | | | 1,338 | 55,667 | 30,014 | 85,680 |
| | | 10 43 00 | CABLE | | | | | | | | | |
| | | | COPPER WIRE / CABLE | | 103 00 TN | - | - | | 1 030 | 42 869 | 23 113 | 65 982 |
| | | | CABLE | | | | | | 1 030 | 42 869 | 23,113 | 65,982 |
| | | | WHOLE PLANT DEMOLITION | | | | | | 19 179 | 846 878 | 416 118 | 1,262,995 |
| | 18 00 00 | | SCRAP VALUE | | | | | | | | | |
| | | 18 10 00 | CARBON STEEL | | | | | | | | | |
| | | | CARBON STEEL | | -6 280 00 TN | - | (1 042 480) | - | | | | (1,042 480) |
| | | | CARBON STEEL | | | | (1,042 480) | | | | | (1,042,480) |
| | | 18 20 00 | STAINLESS STEEL | | | | | | | | | |
| | | | STAINLESS STEEL | CONDENSER TUBES | 58 00 TN | | (48 140) | - | | | | (48,140) |
| | | | STAINLESS STEEL | | | | (48,140) | | | | | (48 140) |
| | | 18 30 00 | COPPER | | | | | | | | | |
| | | | SOLID COPPER | ISO PHASE | -1 00 TN | - | (4 270) | - | | | | (4 270) |
| | | | #1 INSULATED COPPER WIRE 65% | | -103 00 TN | - | (231,647) | - | | | | (231 647) |
| | | | COPPER | | | | (235 917) | | | | | (235,917) |
| | | | SCRAP VALUE | | | | (1 326 537) | | | | | (1 326,537) |
| | | | **C UNIT 5** | | | | **(1,326,537)** | | **19,179** | **846,878** | **416,118** | **(63,542)** |
| **D** | | | **COMMON FACILITIES** | | | | | | | | | |
| | 10 00 00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | | 10 21 00 | CIVIL WORK | | | | | | | | | |
| | | | FENCING REMAINS IN PLACE | | LF | - | - | | | | | |

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AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

| Area | Group | Phase | Description | Notes | Quantity | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 21 00 | CIVIL WORK | | | | | | | | | |
| | | | REMOVE RAILROAD TRACK RAIL, TIES, SPREAD BALLAST | | 100 00 TF | - | - | | 23 | 1,074 | 1 024 | 2 097 |
| | | | PAVED SURFACES | | 1,200 00 SY | - | - | | 144 | 6 872 | 6 552 | 13 424 |
| | | | CIVIL WORK | | | | | | 167 | 7,945 | 7,576 | 15,521 |
| | | 10 22 00 | CONCRETE | | | | | | | | | |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | TRANSFORMER FOUNDATION FIRE WALLS PIERS, CURBS AND BASIN | 30 00 CY | - | - | | 34 | 1,620 | 731 | 2,351 |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS | 1 400 00 CY | - | - | | 1 575 | 75 584 | 34 115 | 109 699 |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | TANK AND PUMP FOUNDATIONS | 300 00 CY | - | - | | 338 | 16,197 | 7,310 | 23 507 |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | CRIB HOUSE | 200 00 CY | - | - | | 225 | 10,798 | 4 874 | 15 671 |
| | | | BUILDING/EQUIPMENT FOUNDATION/PAD | RSO BUILDING SLAB IS LARGER THAN BUILDING, 50FT X 80FT | 222 00 CY | - | - | | 250 | 11 986 | 5 410 | 17 395 |
| | | | CURBS | | 100 00 LF | - | - | | 1 | 57 | 55 | 112 |
| | | | WALKWAYS | | 50 00 CY | - | - | | 26 | 1 260 | 569 | 1,828 |
| | | | CONCRETE | | | | | | 2,448 | 117,501 | 53,062 | 170,563 |
| | | 10 24 00 | ARCHITECTURAL | | | | | | | | | |
| | | | BUILDING | CRIB HOUSE | 14,000 00 CF | | - | | 42 | 1 843 | 1 147 | 2 990 |
| | | | BUILDING | WAREHOUSES AND STOREROOMS | 51,000 00 CF | - | - | | 153 | 6,712 | 4 180 | 10 892 |
| | | | BUILDING | FUEL OIL PUMPHOUSE | 2 880 00 CF | - | - | | 9 | 379 | 236 | 615 |
| | | | BUILDING | WATER TREATMENT | 13 920 00 CF | - | - | | 42 | 1,832 | 1,141 | 2 973 |
| | | | BUILDING | RSO MAINTENANCE, 30FT X 40FT X 20FT TALL | 24 000 00 CF | - | - | | 72 | 3,159 | 1,967 | 5,126 |
| | | | ARCHITECTURAL | | | | | | 317 | 13,924 | 8,671 | 22,596 |
| | | 10 31 00 | MECHANICAL EQUIPMENT | | | | | | | | | |
| | | | FUEL OIL STORAGE TANK 10 000 BBL, 1 EACH | | 40 00 TN | - | - | | 108 | 4,495 | 2,424 | 6 918 |
| | | | MISCELLANEOUS STORTAGE TANKS AND PUMPS | | 687 00 TN | - | - | | 1,855 | 77,201 | 41,624 | 118,825 |
| | | | MISCELLANEOUS FUEL OIL EQUIPMENT | | 50 00 TN | - | - | | 135 | 5 619 | 3,029 | 8,648 |
| | | | MECHANICAL EQUIPMENT | | | | | | 2 098 | 87 315 | 47 077 | 134,391 |
| | | 10 35 00 | PIPING | | | | | | | | | |
| | | | HYDRANTS | | 1 00 LT | - | - | | 60 | 2 863 | 2,730 | 5 593 |
| | | | PIPING | | | | | | 60 | 2,863 | 2,730 | 5,593 |
| | | 10 41 00 | ELECTRICAL EQUIPMENT | | | | | | | | | |
| | | | TRANSFORMERS | | 108 00 TN | - | - | | 289 | 12,011 | 6,476 | 18 486 |
| | | | OUTDOOR LIGHT POLE / FIXTURE | | 180 00 EA | - | - | | 270 | 11 237 | 6 059 | 17 296 |
| | | | ELECTRICAL EQUIPMENT | | | | | | 559 | 23 248 | 12,534 | 35,782 |
| | | | WHOLE PLANT DEMOLITION | | | | | | 5 649 | 252 796 | 131,650 | 384,447 |
| | 18 00 00 | | SCRAP VALUE | | | | | | | | | |
| | | 18 10 00 | CARBON STEEL | | | | | | | | | |
| | | | CARBON STEEL | | -885 00 TN | - | (146 910) | - | | | | (146 910) |
| | | | CARBON STEEL | RAILROAD RAIL | -4 00 TN | - | (664) | - | | | | (664) |
| | | | CARBON STEEL | | | | (147,574) | | | | | (147,574) |
| | | | SCRAP VALUE | | | | (147 574) | | | | | (147,574) |
| | 21 00 00 | | CIVIL WORK | | | | | | | | | |
| | | 21 17 00 | EARTHWORK, EXCAVATION | | | | | | | | | |
| | | | FOUNDATION EXCAVATION USING 1 CY BACKHOE | CONTAMINATED SOIL AND SAND UNDER OIL TANKS | 1,252 00 CY | - | - | | 168 | 9 043 | 3,225 | 12 267 |
| | | | MASS EXCAVATION | LEVEL BERMS AND DIKES | 276 00 CY | - | - | | 11 | 541 | 1 044 | 1 585 |
| | | | EARTHWORK, EXCAVATION | | | | | | 199 | 9,583 | 4,268 | 13,852 |
| | | 21 21 00 | MASS FILL | | | | | | | | | |
| | | | MASS FILL COMMON EARTH USING DUMP TRUCK, 10 MI ROUND TRIP | COVER DISTURBED AREAS OF SITE WITH 2FT OF SOIL | 9 900 00 CY | - | - | 257,400 | 347 | 16 975 | 32 765 | 307,140 |
| | | | MASS FILL | | | | | 257,400 | 347 | 16,975 | 32,765 | 307,140 |
| | | 21 47 00 | LANDSCAPING | | | | | | | | | |
| | | | HYDRO SEEDING | | 3 00 AC | 6 468 | - | - | | - | | 6 468 |
| | | | LANDSCAPING | | | 6 468 | | | | | | 6,468 |
| | | 21 52 00 | WASTE DISPOSAL | | | | | | | | | |
| | | | DISPOSAL AND TRANSPORTATION FEE | BUILDING DEBRIS | 2 000 00 CY | 36 000 | - | | | | - | 36 000 |
| | | | DISPOSAL AND TRANSPORTATION FEE | CONTAMINATED SOIL AND SAND UNDER OIL TANKS | 1,252 00 CY | 37,560 | - | | | | - | 37,560 |

Estimate No 24250F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
ARSENAL HILL POWER STATION
DEMOLITION COST ESTIMATE

| Area | Group | Phase | Description | Notes | Quantity | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | WASTE DISPOSAL | | | 73,560 | | | | | | 73,560 |
| | | | CIVIL WORK | | | 80,028 | | 257,400 | 545 | 26,558 | 37,034 | 401,020 |
| | 22 00 00 | | CONCRETE | | | | | | | | | |
| | | 22 13 00 | CONCRETE | | | | | | | | | |
| | | | FLOWABLE FILL, 1500 PSI | DISCHARGE CLOSURE | 260 00 CY | - | - | 24,700 | 130 | 5,403 | 1,643 | 31,746 |
| | | | CONCRETE | | | | | 24,700 | 130 | 5,403 | 1,643 | 31,746 |
| | | | CONCRETE | | | | | 24,700 | 130 | 5,403 | 1,643 | 31,746 |
| | | | **D COMMON FACILITIES** | | | **80,028** | **(147,574)** | **282,100** | **6,324** | **284,758** | **170,327** | **669,639** |
| **E** | | | **COMMON FACILITIES** | | | | | | | | | |
| | 10 00 00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | | 10 26 00 | MISCELLANEOUS STRUCTURAL ITEM | | | | | | | | | |
| | | | MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE | | 1 00 LT | - | - | | 1 000 | 41 620 | 22,440 | 64 060 |
| | | | MISCELLANEOUS STRUCTURAL ITEM | | | | | | 1,000 | 41,620 | 22,440 | 64,060 |
| | | | WHOLE PLANT DEMOLITION | | | | | | 1,000 | 41 620 | 22 440 | 64 060 |
| | | | **E COMMON FACILITIES** | | | | | | **1,000** | **41,620** | **22,440** | **64,060** |


Dolet Hills Plant Unit 1

# CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0


55 East Monroe Street
Chicago, IL 60603-5780 USA

| Revision Number | Date | Purpose | Prepared By | Reviewed By | Approved By | Pages Affected |
|---|---|---|---|---|---|---|
| A | 07/21/20 | Comments | G. Amen | B. Andric | | All |
| 0 | 8/19/20 | Use | G. Amen | B. Andric | A. Redd | All |

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## 1.0 INTRODUCTION

The Dolet Hills Plant located near Mansfield, Louisiana in DeSoto County is co-owned by both Central Louisiana Electric Company (CLECO) and by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP) and is operated by CLECO. The plant consists of one lignite fired generating unit with a generating capacity of 721 megawatts. Unit 1 was placed in operation in 1986.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Dolet Hills Plant Unit 1 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Dolet Hills Plant Unit 1 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

## 2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24259F was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

**Table 2-1**
**Cost Estimate Code of Accounts**

| Account Number | Description |
|---|---|
| 10 | Demolition Costs |
| 18 | Scrap Value Costs |
| 21 | Civil Work Costs |
| 90, 91, 92 | General Conditions Costs |
| 93 | Indirect Costs |
| 94 | Contingency Costs |
| 96 | Escalation Costs |

The results of the cost estimate are provided in Table 2-2 below:

**Table 2-2**
**Cost Estimate Results Summary**

| Description | Total Cost |
|---|---|
| Demolition Direct Cost | $ 22,560,576 |
| Scrap Value | ($ 8,670,328) |
| General Conditions Costs | $ 5,952,500 |
| Indirect Cost | $ 2,851,300 |
| Contingency Cost | $ 4,003,400 |
| Total Project Cost | $ 26,697,448 |

## 3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Dolet Hills Plant Unit 1 generating facility.

The following are excluded from the scope of the conceptual demolition cost estimate:

- Removal of Ash Basin #1 and #2 and the Secondary Ash Pond
- Make-up Pond Removal
- Mine coal conveyor Removal
- Asbestos Removal
- Switchyard Demolition
- Demolition of Access Roads to the Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- None

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

## 4.0 COMMERCIAL BASIS

### 4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Dolet Hills Plant is a conceptual estimate of the cost to dismantle Dolet Hills Plant Unit 1. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work).

### 4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

### 4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Shreveport, Louisiana as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

#### 4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

#### 4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

## 4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest).
The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Admiralty Brass @ 3,410 $/ton

Note: 1 Ton = 2,000 Lbs

## 4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

## 4.6 Escalation

No allowance for escalation was included in the cost estimate.

## 4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

## 4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- Emergency or black start diesels are not included.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

## 5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

**Table 5-1**
**Reference Drawings**

| Document Number | Revision | Title |
|---|---|---|
| M-2 | Rev E | Property Development Dolet Hills Power Plant Unit No 1 |
| M-3 | Rev. D | Plant Development Dolet Hills Power Plant Unit NO 1 |
| M-5 | Rev J | General Arrangement Ground Floor Plan |
| M-7 | Rev. H | General Arrangement SO2 Area Plan-Upper |
| M-12 | Rev. H | General Arrangement Section A-A |
| M-13 | Rev. G | General Arrangement Section B-B |
| M-300 | Rev B | MATS Project, General Arrangement, Site Plan |
| S-3036 | Rev C | Hydrated Lime Silo Foundation Plan |
| S-3037 | Rev C | PAC Silo Foundation Plan |
| S-3041 | Rev C | Hydrated Lime Blower Bldg Foundation Plan |
| BC13-EQP-008-80 | Rev B | DSI Building & Silos, System Anchor Bolt Plan |

# EXHIBIT 1
# Dolet Hills Plant Unit 1
# Conceptual Demolition Cost Estimate No. 24259F

**AEP SWEPCO**
**DOLET HILLS POWER STATION**
**DEMOLITION ESTIMATE**

| | |
|---|---|
| **Estimator** | GA |
| **Labor rate table** | 20LASHR |
| **Project No.** | A13351.021 |
| **Estimate Date** | 8/19/20 |
| **Reviewed By** | BA |
| **Approved By** | BA |
| **Estimate No.** | 24259F |

Estimate No 24259F
Project No A13351 021
Estimate Date 8/19/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
DOLET HILLS POWER STATION
DEMOLITION ESTIMATE

Sargent & Lundy

| Group | Description | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|
| 10 00 00 | WHOLE PLANT DEMOLITION | 2,475 000 | | | 167,381 | 7,595,423 | 3,880,300 | 13,950,724 |
| 18 00 00 | SCRAP VALUE | | (8 670,328) | | | | | (8,670 328) |
| 21 00 00 | CIVIL WORK | 4,098 548 | | | 36,456 | 1 776,258 | 2 735,045 | 8,609,852 |
| | TOTAL DIRECT | 6,573,548 | (8,670,328) | | 203,836 | 9,371,682 | 6,615,346 | 13,890,248 |

Estimate No 24259F
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AEP SWEPCO
DOLET HILLS POWER STATION
DEMOLITION ESTIMATE

Bergen & Lundy

## Estimate Totals

| Description | Amount | Totals | Hours |
|---|---|---|---|
| Labor | 9,371,682 | | 203,836 |
| Material | | | |
| Subcontract | 6,573,548 | | |
| Construction Equipment | 6,615 346 | | |
| Scrap Value | (8,670,328) | | |
| | 13 890 248 | 13 890,248 | |
| **General Conditions** | | | |
| **Additional Labor Costs** | | | |
| 90-1 Labor Supervision | 562,300 | | |
| 90-2 Show-up Time | 187 400 | | |
| 90-3 Cost Due To OT 5-10's | | | |
| 90-4 Cost Due To OT 6-10's | | | |
| 90-5 Per Diem | | | |
| **Site Overheads** | | | |
| 91-1 Construction Management | 1,012,100 | | |
| 91-2 Field Office Expenses | 222,700 | | |
| 91-3 Material&Quality Control | | | |
| 91-4 Site Services | | | |
| 91-5 Safety | 199,900 | | |
| 91-6 Temporary Facilities | 152,100 | | |
| 91-7 Temporary Utilities | | | |
| 91-8 Mobilization/Demob | 160 300 | | |
| 91-9 Legal Expenses/Claims | 23,700 | | |
| **Other Construction Indirects** | | | |
| 92-1 Small Tools & Consumables | 101,200 | | |
| 92-2 Scaffolding | | | |
| 92-3 General Liability Insur | 101 200 | | |
| 92-4 Constr Equip Mob/Demob | 66 200 | | |
| 92-5 Freight on Material | | | |
| 92-6 Freight on Scrap | | | |
| 92-7 Sales Tax | | | |
| 92-8 Contractors G&A | 1,302 600 | | |
| 92-9 Contractors Profit | 1,860,800 | | |
| | 5,952,500 | 19 842,748 | |
| **Project Indirect Costs** | | | |
| 93-1 Engineering Services | | | |
| 93-2 CM Support | | | |
| 93-3 Start-Up/Commissioning | | | |
| 93-4 Start-Up/Spare Parts | | | |
| 93-5 Excess Liability Insur | | | |
| 93-6 Sales Tax On Indirects | | | |
| 93-7 Owners Cost | 2,851,300 | | |
| 93-8 EPC Fee | | | |
| | 2,851 300 | 22 694,048 | |
| **Contingency** | | | |
| 94-1 Contingency on Const Eq | 780 600 | | |
| 94-3 Contingency on Material | | | |
| 94-4 Contingency on Labor | 1,413 300 | | |
| 94-5 Contingency on Subcontr | 657 400 | | |
| 94-6 Contingency on Scrap | 867 000 | | |
| 94-7 Contingency on Indirect | 285,100 | | |
| | 4,003 400 | 26 697,448 | |
| **Escalation** | | | |
| 96-1 Escalation on Const Equip | | | |
| 96-3 Escalation on Material | | | |
| 96-4 Escalation on Labor | | | |
| 96-5 Escalation on Subcontract | | | |
| 96-6 Escalation on Scrap | | | |
| 96-7 Escalation on Indirects | | | |
| | | 26 697 448 | |
| 98 Interest During Constr | | | |
| | | 26 697,448 | |
| **Total** | | **26,697,448** | |

Estimate No 24259F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

**AEP SWEPCO**
**DOLET HILLS POWER STATION**
**DEMOLITION ESTIMATE**

Bargard & Lundy

| Group | Phase | Description | Notes | Quantity | Subcontract Cost | Scrap Value | Material Cost | Man Hours | Labor Cost | Equip Amount | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 00.00 | | WHOLE PLANT DEMOLITION | | | | | | | | | |
| | 10 21 00 | CIVIL WORK | | | | | | | | | |
| | | FENCING REMAINS IN PLACE | | LF | - | - | | | | | |
| | | REMOVE RAILROAD TRACK RAIL, TIES, SPREAD BALLAST | | 19,300 00 TF | - | - | | 4,343 | 207 224 | 197,584 | 404 808 |
| | | PAVED SURFACES | | 40 660 00 SY | - | - | | 4,879 | 232,835 | 222,004 | 454,839 |
| | | CIVIL WORK | | | | | | 9,222 | 440,060 | 419,587 | 859,647 |
| | 10 22 00 | CONCRETE | | | | | | | | | |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE) | 7,600 00 CY | - | - | | 8,550 | 410,315 | 185 193 | 595 508 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | ASH HANDLING EQUIPMENT FOUNDATION (2FT BELOW GRADE) | 3,600 00 CY | - | - | | 4,050 | 194,360 | 87,723 | 282 083 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS AND BASIN | 200 00 CY | - | - | | 225 | 10,798 | 4 874 | 15 671 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | MISCELLANEOUS EQUIPMENT PADS AND SITE BUILDING FOUNDATIONS | 3,675 00 CY | - | - | | 4,134 | 198,409 | 89 551 | 287,959 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | TANK AND PUMP FOUNDATIONS, CONCRETE BERMS | 2,440 00 CY | - | - | | 2,745 | 131,733 | 59 457 | 191,189 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | WATER SOFTENER TANKS | 200 00 CY | - | - | | 225 | 10,798 | 4 874 | 15 671 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | INTAKE CLOSURE | 1,659 00 CY | - | - | | 1,866 | 89,567 | 40 426 | 129,993 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | DISCHARGE CLOSURE | 1,803 00 CY | - | - | | 2,028 | 97,342 | 43 935 | 141 276 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | FUEL EQUIPMENT MATERIAL HANDLING | 1 669 00 CY | - | - | | 1 878 | 90,107 | 40 669 | 130,777 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | CONCRETE CABLE TRENCHES AND CABLE | 1 500 00 CY | - | - | | 1 688 | 80 983 | 36,551 | 117 534 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | TRANSFORMER FOUNDATION FIRE WALLS, PIERS, CURBS AND BASIN | 200 00 CY | - | - | | 225 | 10,798 | 4 874 | 15 671 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | ACI SYSTEM FOUNDATION | 144 00 CY | - | - | | 162 | 7 774 | 3 509 | 11 283 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | DSI SYSTEM FOUNDATION | 222 00 CY | - | - | | 250 | 11,986 | 5 410 | 17 395 |
| | | BUILDING/EQUIPMENT FOUNDATION/PAD | DSI CONTROL AND PUMPHOUSES | 67 00 CY | - | - | | 75 | 3 617 | 1 633 | 5 250 |
| | | MAIN POWER BLOCK FOUNDATION | INCLUDING MATERIAL HANDLING | 5,189 00 CY | - | - | | 4,380 | 210 173 | 94,860 | 305,033 |
| | | ELEVATED CONCRETE FLOOR / ROOF | | 3,980 00 CY | - | - | | 2,384 | 114,409 | 51 638 | 166,047 |
| | | TURBINE PEDESTAL | | 2,705 00 CY | - | - | | 4,869 | 233,663 | 105 463 | 339,126 |
| | | DISCHARGE OUTFALL STRUCTURE | | 145 00 CY | - | - | | 109 | 5,219 | 2,356 | 7 574 |
| | | CIRC WATER PUMPHOUSE INTAKE & DISCHARGE STRUCTURE | | 500 00 CY | - | - | | 525 | 25,195 | 11,372 | 36,566 |
| | | CURBS | | 2,000 00 LF | - | - | | 24 | 1 152 | 520 | 1 672 |
| | | WALKWAYS | | 65 00 CY | - | - | | 34 | 1,638 | 739 | 2 377 |
| | | PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF | TURBINE ROOM, CONTROL HOUSE, MACHINE SHOP WATER TREATMENT AREA | 41,766 00 SF | - | - | | 626 | 28 900 | 19 647 | 48,547 |
| | | PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF | AIR HEATER ROOM, MISC | 20,120 00 SF | - | - | | 302 | 13 922 | 9,464 | 23,386 |
| | | CONCRETE MECHANICAL DRAFT COOLING TOWER, 330' DIA x 445' HIGH | INCLUDING SHELL , FOUNDATION AND BASIN | 1 00 LS | - | - | | 15 248 | 731,752 | 330,272 | 1 062 023 |
| | | CONCRETE | | | | | | 56,502 | 2,714,607 | 1 235,005 | 3,949 612 |
| | 10 23 00 | STEEL | | | | | | | | | |
| | | STRUCTURAL, GIRT AND GALLERY STEEL | | 10,990 00 TN | - | - | | 11,166 | 507,711 | 180,440 | 688,151 |
| | | STRUCTURAL, GIRT AND GALLERY STEEL | CRUSHER HOUSE | 1,440 00 TN | | - | | 1,463 | 66,524 | 23 643 | 90,167 |
| | | STEEL | | | | | | 12,629 | 574,235 | 204,083 | 778,318 |
| | 10 24.00 | ARCHITECTURAL | | | | | | | | | |
| | | BUILDING | NORTH WAREHOUSE #1 (100' x 60' x 14') | 84,000 00 CF | - | - | | 252 | 11,055 | 6 885 | 17,940 |
| | | BUILDING | NORTH WAREHOUSE #2 (85 x 60 x 14') | 71,400 00 CF | - | - | | 214 | 9,397 | 5 852 | 15,249 |
| | | BUILDING | WEST WAREHOUSE (200' x 70' x 12') | 196,000 00 CF | - | - | | 588 | 25,796 | 16 064 | 41,860 |
| | | BUILDING | COOLING TOWER ELECTRICAL BUILDING (60' x 30' x 10') | 18,000 00 CF | - | - | | 54 | 2,369 | 1 475 | 3,844 |
| | | BUILDING | TRACTOR MAINTENANCE BUILDING (30 x 90' x 18') | 48,600 00 CF | - | - | | 146 | 6,396 | 3 983 | 10,380 |
| | | BUILDING | WATER TREATMENT, CHEM FEED AND CHLORINATION BUILDINGS | 209 137 00 CF | - | - | | 627 | 27,525 | 17,141 | 44 665 |
| | | BUILDING | NEW WATER TREATMENT, CHEM FEED AND CHLORINATION BUILDINGS | 123 200 00 CF | - | - | | 370 | 16,214 | 10,097 | 26,312 |